BNWL-983
APPENDICES
UC-41

EVALUATION OF RADIOLOGICAL CONDITIONS IN THE VICINITY OF HANFORD FOR 1967

APPENDICES

FEBRUARY 1969

AEC RESEARCH & DEVELOPMENT REPORT

BATTELLE NORTHWEST
BATTELLE MEMORIAL INSTITUTE PACIFIC NORTHWEST LABORATORY
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BNWL-983
APPENDICES

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EVALUATION OF RADIOLOGICAL CONDITIONS IN THE VICINITY OF HANFORD FOR 1967

APPENDICES

By

The Environmental Evaluations Staff

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Edited by C. B. Wooldridge

Radiation Protection Department

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February 1969

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Preface

This supplemental report is a compilation of results obtained from both radiochemical analyses of environmental samples and from radiological measurements made in the Hanford environs during 1967. The radiological significance of these data is discussed in the parent report (BNWL-983).

February, 1969

C. B. Wooldridge
Environmental Evaluations

TABLE OF CONTENTS

APPENDIX A
RADIONUCLIDES IN COLUMBIA RIVER WATER

Table		Page
1	Concentrations of Radionuclides in Columbia River Water at Priest Rapids Dam (Cumulative Samples) - 1967	1
2	Concentrations of Radionuclides in Columbia River Water at Ringold Far Shore (Grab Samples) - 1967	3
3	Concentrations of Radionuclides in Columbia River Water at Richland (Grab Samples) - 1967	4
4	Concentrations of Radionuclides in Columbia River Water at Richland (Cumulative Samples) - 1967	5
5	Concentrations of Radionuclides in Columbia River Water at McNary Dam (Cumulative Samples) - 1967	7
6	Concentrations of Radionuclides in Columbia River Water at Bonneville Dam (Cumulative Samples) - 1967	9
7	Estimated Rate of Transport of Radionuclides in Columbia River Water at Ringold Far Shore (Grab Samples) - 1967	11
8	Estimated Rate of Transport of Radionuclides in Columbia River Water at Richland (Grab Samples) - 1967	12
9	Estimated Rate of Transport of Radionuclides in Columbia River Water at Richland (Cumulative Samples) - 1967	13
10	Estimated Rate of Transport of Radionuclides in Columbia River Water at McNary Dam (Cumulative Samples) - 1967	15
11	Estimated Rate of Transport of Radionuclides in Columbia River Water at Bonneville Dam (Cumulative Samples) - 1967	17

APPENDIX B
RADIONUCLIDES IN DRINKING WATER

Table		Page
1	Concentrations of Radionuclides in Richland Drinking Water (Grab Samples) - 1967	19
2	Concentrations of Radionuclides in Richland Drinking Water (Cumulative Samples) - 1967	20
3	Concentrations of Radionuclides in Pasco Drinking Water (Grab Samples) - 1967	22
4	Concentrations of Radionuclides in Pasco Drinking Water (Cumulative Samples) - 1967	23
5	Concentrations of Radionuclides in Kennewick Drinking Water (Grab Samples) - 1967	25
6	Beta Activity in Richland Drinking Water - 1967	26
7	Beta Activity in Pasco Drinking Water - 1967	27
8	Beta Activity in Kennewick Drinking Water - 1967	30

APPENDIX C
RADIONUCLIDES IN FISH AND WILD FOWL

Table		Page
1	Concentrations of Radionuclides in Muscle of Whitefish Taken From the Columbia River - 1967	33
2	Concentrations of Radionuclides in Muscle of Bass Taken From the Columbia River - 1967	44
3	Concentrations of Radionuclides in Muscle of Catfish Taken From the Columbia River - 1967	47
4	Concentrations of Radionuclides in Muscle of Crappie Taken From the Columbia River - 1967	54
5	Concentrations of Radionuclides in Muscle of Perch Taken From the Columbia River - 1967	60

APPENDIX C (Continued)

Table		Page
6	Concentrations of Radionuclides in Muscle of Miscellaneous Fish Taken From the Columbia River - 1967	65
7	Concentrations of Radionuclides in Waterfowl Samples in the Hanford Environs - 1967	69
8	Concentrations of Radionuclides in Upland Game Bird Samples in the Hanford Environs - 1967	77

APPENDIX D
RADIONUCLIDES IN SHELLFISH

1	Concentrations of Radionuclides in Oysters From Willapa Bay, Washington - 1967	81

APPENDIX E
RADIONUCLIDES IN THE ATMOSPHERE

1	Concentrations of ^{131}I in Air of the Hanford Environs - 1967	82
2	Concentrations of Radioactive Particulates in the Air of the Pacific Northwest - 1967	84

APPENDIX F
RADIONUCLIDES IN FARM PRODUCE
AND COMMERCIAL FOODSTUFFS

1	Concentrations of Radionuclides in Milk - 1967	85
2	Concentrations of Radionuclides in Hay and Pasture Grass - 1967	100
3	Concentrations of Radionuclides in Meats Purchased From Local Markets - 1967	112
4	Concentrations of Radionuclides in Locally Grown Fruits and Vegetables - 1967	113

APPENDIX F (Continued)

Table		Page
5	Concentrations of Radionuclides in Chicken and Eggs From Local Farms - 1967	114
6	Concentrations of Radionuclides in Chicken and Eggs Purchased from Local Stores - 1967	115

APPENDIX G
^{131}I IN BEEF THYROIDS

1	^{131}I in Beef Thyroids From Cattle Slaughtered at Several Locations - 1967	116

APPENDIX H
MEASUREMENTS OF EXTERNAL RADIATION EXPOSURE

1	Ionization Chamber Measurements for the Hanford Reservation and Richland - 1967	130
2	Ionization Chamber Measurements in the Columbia River - 1967	132
3	External Exposure Rate Measurements at 3' Above the Columbia River Shoreline at the Richland Traverse and at Sacajawea - 1967	135

APPENDIX I
CHEMICAL CHARACTERISTICS OF COLUMBIA RIVER WATER

1	Chemical Characteristics of Columbia River Water at Hanford - 1967	136
2	Chemical Characteristics of Columbia River Water at Vernita - 1967	137

APPENDIX A

RADIONUCLIDES IN COLUMBIA RIVER WATER

APPENDIX A
TABLE 1

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT PRIEST RAPIDS DAM (Cumulative Samples) - 1967

Units of pCi/ℓ

Date		Total Alpha	^{3}H	^{90}Sr
Analytical Limit		1.0	1000	0.5
12-28-66	1-3	<1.0	<1000	0.89
1-3	1-10	<1.0	<1000	0.89
1-10	1-17	<1.0	<1000	0.72
1-17	1-24	<1.0	<1000	0.71
1-24	1-31	<1.0	1700	0.70
1-31	2-7	<1.0	1500	0.68
2-7	2-14	<1.0	1900	0.68
2-14	2-21	<1.0	1700	0.87
2-21	2-28	<1.0	1900	0.65
3-21	3-28	<1.0	1800	0.56
3-28	4-4	<1.0	1700	0.56
4-4	4-11	<1.0	1700	0.79
4-11	4-18	<1.0	1600	0.51
4-18	4-25	<1.0	1600	0.65
4-25	5-2	<1.0	1800	0.63
5-2	5-9	<1.0	1300	<0.50
5-9	5-16	<1.0	<1000	0.57
5-16	5-23	<1.0	<1000	0.86
5-23	5-31	<1.0	<1000	0.84
5-31	6-6	<1.0	1100	0.75
6-6	6-13	<1.0	1400	0.58
6-13	6-20	<1.0	1500	0.66
6-20	6-27	<1.0	2300	0.78
6-27	7-5	<1.0	1200	0.52
7-5	7-11	<1.0	1200	0.88
7-11	7-18	<1.0	<1000	0.53
7-18	7-25	<1.0	1420	0.80
7-25	8-1	<1.0	<1000	0.64
8-1	8-8	<1.0	1300	0.60
8-8	8-15	<1.0	<1000	<0.50
8-15	8-22	<1.0	1300	<0.50
8-22	8-29	<1.0	1100	0.50
8-29	9-6			
9-6	9-12	1.38	1900	0.52

No entry indicates no samples taken.

APPENDIX A
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT PRIEST RAPIDS DAM (Cumulative Samples) - 1967

Units of pCi/ℓ

Date		Total Alpha	^{3}H	^{90}Sr
Analytical Limit		1.0	1000	0.5
9-12	9-19	<1.0	1600	1.10
9-19	9-26	<1.0	1700	0.74
9-26	10-3	<1.0	1000	<0.50
10-3	10-10	<1.0	<1000	<0.50
10-10	10-17	<1.0	1600	.70
10-17	10-24	<1.0	1300	.52
10-24	10-31	<1.0	1600	.69
10-31	11-7	<1.0	<1000	.89
11-7	11-14	<1.0	<1000	.52
11-14	11-21	<1.0	<1000	.55
11-21	11-28	<1.0	<1000	.65
11-28	12-5	<1.0	<1000	.47
12-5	12-12	<1.0	<1000	.50
12-12	12-19	<1.0	<1000	.57
12-19	12-27	<1.0	<1000	.48

No entry indicates no samples taken.

APPENDIX A
TABLE 2

CONCENTRATIONS OF RADIONUCLIDES IN
COLUMBIA RIVER WATER AT RINGOLD FAR SHORE (Grab Samples) - 1967
Units of pCi/ℓ of water

Date	RE+Y	^{24}Na	^{32}P	^{51}Cr	^{56}Mn	^{64}Cu	^{65}Zn	^{69m}Zn	^{72}Ga	^{76}As	^{122}Sb	^{239}Np
Analytical Limit	5	35	6	70	50	20	20	70	70	5	5	10
1-24	400	3300	170	2800	1000	2800	NA	76	280	380	NA	780
2-28	500	4800	54	3300	1100	2600	NA	88	180	440	NA	910
3-28	500	2400	88	1700	1300	1600	NA	430	120	240	NA	1400
4-25	700	2400	180	2200	2400	1600	NA	340	170	320	NA	740
5-23	300	1600	74	1300	870	1000	90	83	120	140	NA	380
6-27	200	600	35	390	1300	830	44	39	<70	88	39	200
7-25	200	1100	50	1200	640	1100	51	32	76	120	62	400
8-22	200	2200	25	2000	1600	2300	78	<70	22	330	84	740
9-26	100	1200	12	1100	310	1100	68	<70	<70	140	52	410
10-24	400	3300	150	2700	750	2700	180	97	79	480	160	840
11-28	300	1700	120	1800	530	1500	100	<70	140	370	96	490
12-												

NA - No analysis made.
No entry indicates no sample taken.

APPENDIX A
TABLE 3

CONCENTRATIONS OF RADIONUCLIDES IN
COLUMBIA RIVER WATER AT RICHLAND (Grab Samples) - 1967
Units of pCi/ℓ of water

Date	RE+Y	^{3}H	^{24}Na	^{32}P	^{51}Cr	^{54}Mn	^{56}Mr	^{64}Cu	^{65}Zn	^{76}As	^{90}Sr	^{122}Sb	^{131}I	^{239}Np
Analytical Limit	5	1000	35	6	70	2	50	20	20	5	0.5	5	2	10
1-9	200	2000	2600	230	5110	9	50	1500	250	400	1.4		10	920
2-14	290	1500	3000	180	3100	8	170	4800	280	320	1.0		8	700
3-13	270	1700	2200	140	2900	6	73	1100	190	270	0.7		6	620
4-10	1300	1500	5200	480	6300	46	1700	3100	470	680	1.2		10	1800
5-8	390	1200	1500	230	4000	17	71	970	280	260	0.6		11	870
6-12	340	2000	1000	54	750	26	1700	1400	230	130	0.5	77	2	450
7-10	680	1100	1300	73	1780	7	1700	1600	120	180	2.3	100	47	2600
8-14	230	2000	2300	55	2900	19	400	1500	130	280	0.7	160	6	770
9-11	180	1600	2200	95	2600	18	58	1500	74	380	0.8	140	6	860
10-11	200	1100	3200	350	4600	10	240	2300	130	530	0.8	170	12	1200
11-13	170	1300	3400	190	5400	15	70	2000	110	640	0.9	200	11	1100
12-11	380	1400	3800	260	5100	17	92	2000	120	700	0.6	190	11	1300

No entry indicates no analysis made.

APPENDIX A
TABLE 4

CONCENTRATIONS OF RADIONUCLIDES IN
COLUMBIA RIVER WATER AT RICHLAND (Cumulative Samples) - 1967
Units of pCi/ℓ of water

Date		^{32}P	^{46}Sc	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6		70	20	2
12-27-66	1-3-67	180	31	5300	220	11
1-3	1-9	150	43	4100	250	8
1-9	1-16	180	42	4800	250	9
1-16	1-23	180	27	4400	230	7
1-23	1-30	230	34	4800	270	9
1-30	2-6	210	40	4300	270	10
2-6	2-14	210	22	5100	240	6
2-14	2-20	380	30	4300	260	8
2-20	2-27	140	<14	3900	140	7
2-27	3-6	270	35	4000	280	8
3-6	3-13	130	21	3100	250	8
3-13	3-20	160	33	3700	310	7
3-20	3-27	140	28	3400	290	7
3-27	4-3	150	36	2400	230	10
4-3	4-10	230	44	4200	340	10
4-10	4-17	280	37	4300	320	10
4-17	4-24	230	36	3700	290	7
4-24	5-1	200	53	3800	340	6
5-1	5-8	260	32	3800	320	9
5-8	5-15	170	44	3900	390	6
5-15	5-22	200	71	3800	460	6
5-22	5-29	140	110	2100	1100	3
5-29	6-5	74	29	1300	640	3
6-5	6-12	38	38	880	2800	2
6-12	6-19	36	40	840	260	<2
6-19	6-26	26	48	1200	260	<2
6-26	6-27	44	4	750	280	<2
6-27	7-3	25	8	820	--	<2
7-3	7-10	40	36	1200	170	4
7-10	7-17	52	61	970	120	6
7-17	7-24	79	35	1900	90	6
7-24	7-31	54	49	1700	89	6
7-31	8-7	21	62	2200	130	5
8-7	8-14	51	53	2530	110	5

-- Indicates that the analysis was invalid

APPENDIX A
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
COLUMBIA RIVER WATER AT RICHLAND (Cumulative Samples) - 1967
Units of pCi/ℓ of water

Date		^{32}P	^{46}Sc	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6		70	20	2
8-14	8-21	65	46	3300	89	7
8-21	8-28	120	80	3700	120	7
8-28	9-5	62	26	3500	37	9
9-5	9-11	77	100	3300	110	7
9-11	9-18	64	36	3000	86	25
9-18	9-25	--	36	3100	49	23
9-25	10-2	77	140	2400	99	23
10-2	10-9	100	98	4600	160	9
10-9	10-16	140	76	4000	130	9
10-16	10-23	100	66	3300	130	8
10-23	10-30	94	59	2800	110	37
10-30	11-6	96	120	3000	120	6
11-6	11-13	130	100	3000	110	6
11-13	11-20	130	130	4500	120	9
11-20	11-27	120	130	3500	150	6
11-27	12-4	92	100	3000	100	2
12-4	12-11	87	110	3200	100	6
12-11	12-18	79	140	3400	130	4
12-18	12-27	81	150	3600	110	4

-- Indicates that the analysis was invalid

APPENDIX A
TABLE 5

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT MCNARY DAM (Cumulative Samples) - 1967

Units of pCi/ℓ of water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6	70	20	2
12-30-66--1-6		76	3200	120	4
1-6	1-13	95	2700	140	3
1-13	1-20	73	2700	130	4
1-20	1-27	64	2200	120	6
1-27	2-3	67	2300	120	6
2-3	2-10	56	1900	95	4
2-10	2-17	66	2600	130	6
2-17	2-24	69	2400	120	4
2-24	3-3	65	2900	160	3
3-3	3-10	27	2000	180	3
3-10	3-17	39	1700	110	5
3-17	3-24	69	2100	150	3
3-24	3-31	53	1700	130	3
3-31	4-7	57	1300	130	3
4-7	4-14	82	2300	130	4
4-14	4-21	93	2200	150	3
4-21	4-28	96	2200	160	3
4-28	5-5	180	2000	220	4
5-5	5-12	96	2000	140	3
5-12	5-19	LOST	1400	120	
5-19	5-26	28	880	78	
5-26	6-2	13	390	66	<2
6-2	6-9	10	240	39	<2
6-9	6-16	<6	180	32	<2
6-16	6-23	29	550	37	<2
6-23	6-30	16	430	27	<2
6-30	7-7	26	620	34	<2
7-7	7-14	37	820	34	4
7-14	7-21	42	1200	36	3
7-21	7-28	34	1400	73	4
7-28	8-4	31	1400	50	4
8-4	8-11	24	1400	54	5
8-11	8-18	<6	1700	45	3
8-18	8-25	39	1900	24	6

No entry indicates no analysis made.

APPENDIX A
TABLE 5 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT MCNARY DAM (Cumulative Samples) - 1967

Units of pCi/ℓ of water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6	70	20	2
8-28	9-1	44	2600	<20	
9-1	9-8	47	2200	36	8
9-8	9-15	37	2600	34	4
9-15	9-22	24	2000	20	6
9-22	9-29	30	1900	31	15
9-29	10-6	38	1600	50	36
10-6	10-13	55	2000	49	4
10-13	10-20	59	2400	72	4
10-20	10-27	40	2100	75	4
10-27	11-3	44	1800	72	6
11-3	11-10	19	1800	62	4
11-10	11-17	41	1500	59	3
11-17	11-27	45	2300	59	4
11-27	12-1	35	2000	63	2
12-1	12-8	49	1200	52	4
12-8	12-15	46	1300	45	4
12-15	12-22	47	1100	48	6
12-22	12-29	60	1600	44	3

No entry indicates no analysis made.

APPENDIX A
TABLE 6

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT BONNEVILLE DAM (Cumulative Samples) - 1967

Units of pCi/ℓ of water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6	70	20	2
12-27-66--1-3		27	2200	28	5
1-3	1-10	27	2200	34	4
1-10	1-17	31	1900	36	2
1-17	1-24	31	1800	46	3
1-24	1-31	39	1500	49	6
1-31	2-7	31	1600	70	< 2
2-7	2-14	35	1600	47	< 2
2-14	2-21	41	1900	59	2
2-21	2-28	32	1600	64	< 2
2-28	3-7	34	2000	65	< 2
3-7	3-14	18	1300	68	2
3-14	3-21	29	1300	73	2
3-21	3-28	32	1600	81	2
3-28	4-4	33	1300	80	< 2
4-4	4-11	31	1000	81	< 2
4-11	4-18	30	1500	86	2
4-18	4-25	57	1700	100	2
4-25	5-2	64	1800	110	2
5-2	5-9	67	1500	130	< 2
5-9	5-16	60	1500	130	3
5-16	5-23	48	1200	130	< 2
5-23	5-30	27	730	99	< 2
5-30	6-6	11	760	160	< 2
6-6	6-13	18	540	160	< 2
6-13	6-20	15	640	110	< 2
6-20	6-27	15	730	110	< 2
6-27	7-4	26	470	74	2
7-4	7-11	17	3800	290	< 2
7-11	7-18	17	810	60	2
7-18	7-25	18	860	34	14
7-25	8-1	26	1100	34	4
8-1	8-8	18	1100	47	3
8-8	8-15	34	960	< 20	2
8-15	8-22	17	1300	23	< 2
8-22	8-29	16	1500	< 20	< 2
8-29	9-5	11	1700	< 20	< 2
9-5	9-12	14	3600	< 20	3

APPENDIX A
TABLE 6 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN COLUMBIA RIVER WATER AT BONNEVILLE DAM (Cumulative Samples) - 1967

Units of pCi/ℓ of water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6	70	20	2
9-12	9-19	17	1900	26	2
9-19	9-26	10	1000	23	<2
9-26	10-3	11	1200	<20	9
10-3	10-10	10	1200	<20	6
10-10	10-17	15	1200	28	4
10-17	10-24	13	1600	<20	2
10-24	10-31	9	1200	<20	3
10-31	11-7	11	1000	<20	2
11-7	11-14	12	1000	<20	4
11-14	11-21	12	1100	<20	<2
11-21	11-28	16	1400	<20	<2
11-28	12-5	19	1500	29	2
12-5	12-12	15	1300	30	3
12-12	12-19	18	1200	<20	2
12-19	12-26	17	1200	32	2

APPENDIX A
TABLE 7

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER WATER AT RINGOLD FAR SHORE (Grab Samples) - 1967
Units of Curies/Day

Date	RE+Y	^{24}Na	^{32}P	^{51}Cr	^{56}Mn	^{64}Cu	^{65}Zn	^{69m}Zn	^{72}Ga	^{76}As	^{122}Sb	^{239}Np
1-24	82	620	32	510	190	510	NA	14	50	69	NA	140
2-28	99	1000	12	710	230	560	NA	19	370	94	NA	200
3-28	100	530	19	360	290	340	NA	92	26	51	NA	300
4-25	200	680	51	620	680	450	NA	95	49	88	NA	210
5-23	120	720	34	610	410	490	42	39	54	67	NA	180
6-27	180	750	41	450	1500	960	51	45	81	100	45	220
7-25	100	570	26	630	340	600	27	16	40	63	33	210
8-22	59	600	7	540	440	610	21	19	60	90	23	200
9-26	27	250	2	220	63	220	14	<14	<14	29	10	84
10-24	93	720	32	580	160	580	40	21	17	100	33	180
11-28	63	380	26	390	120	340	22	<15	31	82	21	110
12-												

NA - No analysis made.
No entry indicates no samples taken.

APPENDIX A
TABLE 8

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER WATER AT RICHLAND (Grab Samples) - 1967
Units of Curies/Day

Date	RE+Y	^{24}Na	^{32}P	^{51}Cr	^{54}Mn	^{56}Mn	^{64}Cu	^{65}Zn	^{76}As	^{90}Sr	^{122}Sb	^{131}I	^{239}Np
1-9	50	660	59	1300	2	<13	370	62	100	.34		2.5	230
2-14	78	800	48	820	2	45	1300	74	85	.25		2.1	190
3-13	69	560	37	750	2	19	300	49	71	.17		1.7	160
4-10	310	1200	110	1500	11	390	730	110	160	.27		2.3	410
5-8	72	270	42	730	3	13	180	51	47	.12		1.9	160
6-12	370	1200	60	830	29	1900	1500	260	140	.56	86	2.4	500
7-10	570	1100	61	1500	6	1400	1400	100	160	.69	86	3.3	160
8-14	60	600	14	760	5	100	400	34	72	.17	41	1.6	200
9-11	38	470	20	550	4	12	310	16	79	.17	30	1.3	180
10-11	35	570	63	830	2	44	410	24	96	.14	31	2.2	210
11-13	32	620	34	990	3	13	370	20	120	.16	36	2.0	210
12-11	89	900	61	1200	4	22	470	29	160	.13	45	2.6	310

No entry indicates no analysis made.

APPENDIX A
TABLE 9

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER AT RICHLAND (Cumulative Samples) - 1967
Units of Curies/Day

Date		^{32}P	^{46}Sc	^{51}Cr	^{65}Zn	^{131}I
12-27-66--1-3		32	6	1000	43	6
1-3	1-9	32	9	850	52	9
1-9	1-16	35	8	920	47	8
1-16	1-23	32	5	760	41	5
1-23	1-30	39	6	840	48	6
1-30	2-6	31	6	640	40	6
2-6	2-14	43	4	1000	49	4
2-14	2-20	75	6	850	52	6
2-20	2-27	27	3	780	28	3
2-27	3-6	56	7	850	59	7
3-6	3-13	30	5	690	56	5
3-13	3-20	36	7	810	68	7
3-20	3-27	29	6	700	59	6
3-27	4-3	32	8	530	50	8
4-3	4-10	53	10	970	78	10
4-10	4-17	57	8	880	65	8
4-17	4-24	57	9	910	71	9
4-24	5-1	46	12	850	77	12
5-1	5-8	50	6	730	62	6
5-8	5-15	33	8	740	74	8
5-15	5-22	57	20	1100	130	20
5-22	5-29	75	59	1200	600	59
5-29	6-5	55	22	980	480	22
6-5	6-12	40	41	930	300	41
6-12	6-19	40	44	940	290	44
6-19	6-26	28	52	1300	280	52
6-26	7-3	27	8	900		8
7-3	7-10	37	33	1100	160	33
7-10	7-17	40	46	730	90	46
7-17	7-24	47	21	1100	54	21
7-24	7-31	26	24	830	89	24
7-31	8-7	9	26	930	57	26
8-7	8-14	14	15	720	31	15
8-14	8-21	18	13	890	24	13
8-21	8-28	33	22	990	32	22
8-28	9-5	14	6	760	8	6
9-5	9-11	16	22	690	23	22

No entry indicates analysis was invalid.

APPENDIX A
TABLE 9 (Continued)

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER AT RICHLAND (Cumulative Samples) - 1967
Units of Curies/Day

Date		^{32}P	^{46}Sc	^{51}Cr	^{65}Zn	^{131}I
9-11	9-18	13	7	590	17	7
9-18	9-25		8	660	10	8
9-25	10-2	14	25	430	18	25
10-2	10-9	19	18	860	30	2
10-9	10-16	27	14	750	25	2
10-16	10-23	18	12	590	23	2
10-23	10-30	16	10	480	18	6
10-30	11-6	17	22	540	22	1
11-6	11-13	22	17	510	19	1
11-13	11-20	22	22	770	21	2
11-20	11-27	22	25	650	28	1
11-27	12-4	19	22	610	21	0.5
12-4	12-11	19	25	700	23	1
12-11	12-18	19	33	820	30	1
12-18	12-27	18	32	780	24	1

No entry indicates analysis was invalid.

APPENDIX A
TABLE 10

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER WATER AT MCNARY DAM (Cumulative Samples) - 1967
Units of Curies/Day

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
12-30-66/1-6-67		21	890	33	1
1-6	1-13	27	760	39	0.8
1-13	1-20	21	800	38	1
1-20	1-27	19	650	36	2
1-27	2-3	21	700	39	2
2-3	2-10	17	560	29	1
2-10	2-17	20	790	39	2
2-17	2-24	19	680	35	1
2-24	3-3	19	860	47	0.8
3-3	3-10	8	620	56	1
3-10	3-17	12	520	32	2
3-17	3-24	21	660	45	1
3-24	3-31	18	580	43	1
3-31	4-7	19	420	42	1
4-7	4-14	28	800	43	1
4-14	4-21	32	750	51	0.9
4-21	4-28	34	790	58	1
4-28	5-5	58	640	69	1
5-5	5-12	35	710	52	1
5-12	5-19	LOST	650	54	
5-19	5-26	13	720	64	
5-26	6-2	13	400	68	<2
6-2	6-9	13	310	49	<2
6-9	6-16	< 9	250	46	<3
6-16	6-23	42	800	54	<3
6-23	6-30	23	620	39	<3
6-30	7-7	32	760	41	<2
7-7	7-14	36	810	33	4
7-14	7-21	32	900	27	2
7-21	7-28	21	870	45	3
7-28	8-4	16	740	26	2
8-4	8-11	11	620	23	2
8-11	8-18	< 2	550	15	1
8-18	8-25	13	640	8	2
8-28	9-1	14	840	< 6	
9-1	9-8	11	500	8	2
9-8	9-15	10	690	9	1

No entry indicates no analysis made.

APPENDIX A
TABLE 10 (Continued)

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES
IN COLUMBIA RIVER WATER AT MCNARY DAM (Cumulative Samples) - 1967
Units of Curies/Day

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
9-15	9-22	7	520	5	2
9-22	9-29	8	470	8	4
9-29	10-6	10	400	12	9
10-6	10-13	14	520	13	0.9
10-13	10-20	16	640	19	1.
10-20	10-27	10	520	18	0.9
10-27	11-3	11	440	17	2
11-3	11-10	5	490	17	1
11-10	11-17	11	400	15	0.7
11-17	11-27	12	600	15	1
11-27	12-1	11	620	20	0.7
12-1	12-8	15	360	16	1
12-8	12-15	14	390	14	1
12-15	12-22	15	360	15	2
12-22	12-29	18	460	13	1

No entry indicates no analysis made.

APPENDIX A
TABLE 11

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES IN COLUMBIA RIVER AT BONNEVILLE DAM (Cumulative Samples) - 1967

Units of Curies/Day

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
12-27-66/1-3-67		8	620	8	1.4
1-3	1-10	8	660	10	1.2
1-10	1-17	9	560	11	0.7
1-17	1-24	10	580	15	1.1
1-24	1-31	14	520	17	1.9
1-31	2-7	11	580	25	<0.7
2-7	2-14	12	540	16	<0.7
2-14	2-21	13	600	19	0.7
2-21	2-28	10	520	20	<0.6
2-28	3-7	11	650	21	<0.7
3-7	3-14	6	430	22	0.7
3-14	3-21	10	420	24	0.8
3-21	3-28	12	590	29	0.8
3-28	4-4	12	490	29	<0.7
4-4	4-11	11	350	28	<0.7
4-11	4-18	10	500	29	0.8
4-18	4-25	22	650	39	0.7
4-25	5-2	24	660	43	0.8
5-2	5-9	22	500	43	< 0.7
5-9	5-16	28	710	60	1.5
5-16	5-23	30	750	83	< 1.2
5-23	5-30	28	760	100	< 2.1
5-30	6-6	12	860	183	< 2.3
6-6	6-13	26	770	230	< 2.9
6-13	6-20	22	940	160	< 2.9
6-20	6-27	22	1100	160	< 3.0
6-27	7-4	37	650	100	2.9
7-4	7-11	20	4300	320	<2.2
7-11	7-18	15	710	52	1.9
7-18	7-25	12	590	23	9.9
7-25	8-1	15	650	20	2.1
8-1	8-8	9	540	24	1.3
8-8	8-15	12	350	<7	0.9
8-15	8-22	6	470	8	<0.7
8-22	8-29	5	460	<6	<0.6
8-29	9-5	3	500	<6	<0.6
9-5	9-12	4	930	<5	0.7

APPENDIX A
TABLE 11 (Continued)

ESTIMATED RATE OF TRANSPORT OF RADIONUCLIDES IN COLUMBIA RIVER AT BONNEVILLE DAM (Cumulative Samples) - 1967

Units of Curies/Day

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
9-12	9-19	5	540	7	0.6
9-19	9-26	3	280	6	<0.6
9-26	10-3	3	320	5	2.3
10-3	10-10	3	310	<5	1.7
10-10	10-17	4	320	7	1.1
10-17	10-24	4	440	<6	0.6
10-24	10-31	2	330	<5	0.9
10-31	11-7	3	280	<5	0.5
11-7	11-14	4	290	<6	1.0
11-14	11-21	3	320	<6	<0.6
11-21	11-28	5	380	<6	<0.6
11-28	12-5	6	470	9	0.7
12-5	12-12	5	420	10	0.9
12-12	12-19	6	400	<7	0.7
12-19	12-26	6	420	11	0.8

APPENDIX B

RADIONUCLIDES IN DRINKING WATER

APPENDIX B
TABLE 1

CONCENTRATIONS OF RADIONUCLIDES IN RICHLAND DRINKING WATER (Grab Samples) - 1967

Units of pCi/ℓ of water

Date	RE+Y	^{24}Na	^{32}P	^{51}Cr	^{64}Cu	^{76}As	^{90}Sr	^{122}Sb	^{239}Np
Anal. Limit	5.0	35.	6.0	70.	20	5.0	0.5	5.0	0.5
1-3	100	4100	240	7600	1600	420	2.4	160	1200
2-6	76	2400	45	6000	750	280	1.1	150	920
3-8	52	2100	47	2700	110	82	0.56	140	520
4-3	61	440	29	1600	59	150	0.97	110	330
5-1	40	1800	37	2500	300	75	0.92	230	600
6-5	40	1100	12	950	440	40	0.76	110	300
7-3	65	940	22	1000	420	71	0.58	100	300
8-7	160	1500	59	2200	770	210	0.73	74	560
9-5	230	1700	9	3800	440	160	0.61	160	810
10-2	22	1100	13	1900	730	75	1.1	110	480
11-6	160	1900	120	3300	840	322	0.81	170	711
12-4	28	1000	60	2200	320	88	0.59	130	430

APPENDIX B
TABLE 2

CONCENTRATIONS OF RADIONUCLIDES IN RICHLAND DRINKING WATER (Cumulative Samples) - 1967

Units of pCi/ of Water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6.0	70	20	2.0
12-27-66/1-3-67		120	5700	150	7.3
1-3	1-9	100	3600	140	7.2
1-9	1-16	150	5100	180	10
1-16	1-23	160	4700	180	8.9
1-23	1-30	180	5100	200	9.6
1-30	2-6	130	4000	180	9.2
2-6	2-14	51	5100	160	8.5
2-14	2-20	59	4700	160	5.8
2-20	2-27	80	5100	200	7.8
2-27	3-6	54	4100	220	8.5
3-6	3-13	30	3200	170	8.4
3-13	3-20	27	3700	170	4.2
3-20	3-27	14	3600	130	5.9
3-27	4-3	35	2500	97	7.2
4-3	4-10	21	4100	130	8.4
4-10	4-17	26	3700	120	7.8
4-17	4-24	27	4600	130	6.0
4-24	5-1	23	2800	120	7.1
5-1	5-8	100	3500	96	10
5-8	5-15	80	3500	100	6.0
5-15	5-22	110	3600	94	6.0
5-22	5-29	24	1600	81	2.3
5-29	6-5	11	1100	48	2.6
6-5	6-12	-	850	39	2.4
6-12	6-19	9.	940	-	-
6-19	6-26	6.	1100	-	-
6-26	6-27	-	720	24	-
6-27	7-3	8.	640	**	-
7-3	7-10	**	1300	56	-
7-10	7-17	7.	4700	110	4.0

Results less than analytical limit indicated by a (-).
** (Invalid analysis)

APPENDIX B
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN RICHLAND DRINKING WATER (Cumulative samples) - 1967

Units of pCi/ℓ of Water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6.0	70	20	2.0
7-17	7-24	12	1700	30	4.6
7-24	7-31	13	1600	-	7.4
7-31	8-7	33	1800	26	4.5
8-7	8-14	25	2200	-	4.8
8-14	8-21	9.		29	5.1
8-21	8-28	10	3200	24	7.1
8-28	9-5	16	3800	-	8.8
9-5	9-11	16	3100	-	7.3
9-11	9-18	12	2800	-	18
9-18	9-25	10	2600	-	30
9-25	10-2	**	**	**	**
10-2	10-9	16	3500	22	8.1
10-9	10-16	27	3700	37	8.4
10-16	10-23	53	3100	37	7.4
10-23	10-30	54	2900	44	32
10-30	11-6	51	2800	61	7.6
11-6	11-13	26	2700	62	6.9
11-13	11-20	84	3900	53	10
11-20	11-27	94	3500	64	8.8
11-27	12-4	63	2700	53	3.8
12-4	12-11	63	3000	65	5.7
12-11	12-18	53	2300	55	5.2
12-18	12-27	36	2100	49	9.2

Results less than analytical limit indicated by a (-).
** (Invalid analysis)

APPENDIX B
TABLE 3

CONCENTRATIONS OF RADIONUCLIDES IN PASCO DRINKING WATER (Grab samples) - 1967
Units of pCi/ℓ of Water

Date	RE+Y	^{24}Na	^{32}P	^{51}Cr	^{64}Cu	^{76}As	^{90}Sr	^{122}Sb	^{239}Np
Analytical Limit	5.0	35	6.0	70	20	5.0	0.5	5.0	0.5
1-3-67	85	400	160	4500	110	49	3.9	62	350
2-6-67	42	180	140	2600	40	57	1.0	60	260
3-8-67	34	480	40	2900	55	50	1.3	89	360
4-3-67	28	3200	25	5300	490	54	0.57	400	1100
5-1-67	79	650	99	2700	36	81	0.67	200	440
6-5-67	14	660	-	660	180	16	-	49	210
7-3-67	13	710	-	830	170	20	0.75	80	240
8-7-67	62	860	26	1700	240	140	0.74	44	370
9-5-67	46	970	7.0	3600	270	77	0.74	110	690
10-2-67	110	700	39	2300	200	56	2.0	93	480
11-6-67	27	420	34	2200	93	46	0.8	92	311
12-4-67	13	190	54	1600	99	21	0.65	100	240

Results less than analytical limit indicated by a (-).

APPENDIX B
TABLE 4

CONCENTRATIONS OF RADIONUCLIDES IN
PASCO DRINKING WATER (Cumulative samples) - 1967
Units of pCi/ℓ of Water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6.0	70	20	2.0
12-27-66/1-3-67		43	4800	81	7.1
1-3	1-9	36	3700	91	5.3
1-9	1-16	120	4000	100	10
1-16	1-23	13	4400	160	7.9
1-23	1-30	150	4000	160	7.8
1-30	2-6	85	3400	180	9.2
2-6	2-14	56	4400	140	5.6
2-14	2-20	39	3800	130	6.7
2-20	2-27	41	4100	150	3.9
2-27	3-6	47	4200	190	7.3
3-6	3-13	39	2400	140	5.7
3-13	3-20	34	3100	160	3.4
3-20	3-27	23	2800	140	4.7
3-27	4-3	12	2000	150	5.6
4-3	4-10	29	3200	92	6.8
4-10	4-17	39	3600	100	6.8
4-17	4-24	31	3100	98	6.0
4-24	5-1	32	2700	82	8.6
5-1	5-8	38	3200	73	8.0
5-8	5-15	39	3100	71	7.4
5-15	5-22	32	3300	70	4.6
5-22	5-29	14	1300	55	-
5-29	6-5	-	970	61	2.3
6-5	6-12	-	620	34	-
6-12	6-19	-	770	22	-
6-19	6-26	-	740	-	2.0
6-26	7-3	-	640	21	-
7-3	7-10	-	840	-	-
7-10	7-17	-	3900	84	3.1
7-17	7-24	6.9	1400	-	3.1
7-24	7-31	-	1400	-	5.9
7-31	8-7	7.2	1500	-	3.8

Results less than analytical limit indicated by a (-).

APPENDIX B
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
PASCO DRINKING WATER (Cumulative samples) - 1967
Units of pCi/ℓ of Water

Date		^{32}P	^{51}Cr	^{65}Zn	^{131}I
Analytical Limit		6.0	70	20	2.0
8-7	8-14	-	2000	-	4.4
8-14	8-21	39	2200	-	6.1
8-21	8-28	10	3000	-	4.8
8-28	9-5	13	3400	-	6.5
9-5	9-11	16	3100	-	2.6
9-11	9-18	9.7	2500	-	8.4
9-18	9-25	6.3	2700	-	30
9-25	10-2	17	2200	-	21
10-2	10-9	16	3200	-	9.3
10-9	10-16	20	3500	-	6.0
10-16	10-23	21	2900	-	7.0
10-23	10-30	7.2	2800	21	11
10-30	11-6	17	2600	24	13
11-6	11-13	-	2400	32	4.5
11-13	11-20	17	3600	-	6.7
11-20	11-27	60	3200	-	5.6
11-27	12-4	47	2900	34	3.0
12-4	12-11	40	2300	42	3.8
12-11	12-18	55	2700	36	4.7
12-18	12-27	36	1800	38	-

Results less than analytical limit indicated by a (-).

APPENDIX B
TABLE 5

CONCENTRATIONS OF RADIONUCLIDES IN
KENNEWICK DRINKING WATER (Grab samples) - 1967
Units of pCi/ℓ of Water

Date	^{24}Na	^{32}P	^{51}Cr	^{64}Cu	^{65}Zn	^{76}As	^{122}Sb	^{131}I	^{239}Np
Analytical Limit	35	6.0	70	20	20	5.0	5.0	2.0	0.5
1-16	100	17	1700	35	-	14	9.4	3.1	56
2-20	71	30	1600	20	-	15	13	-	50
3-20	100	15	1400	36	-	15	14	-	47
4-17	160	30	1800	53	-	26	42	-	94
5-15	160	35	1300	53	-	28	34	-	96
6-19	110	9.0	430	100	-	18	13	-	36
7-17	86	-	430	68	-	13	7.5	-	32
8-21	83	-	1000	54	-	14	10	-	51
9-18	48	-	1200	34	-	12	17	4.7	56
10-16	77	11	1400	35	-	13	18	-	57
11-20	100	12	1500	-	22	15	22	-	72
12-18	-	-	670	-	-	10	13	-	14

Results less than analytical limit indicated by a (-).

APPENDIX B
TABLE 6

BETA ACTIVITY IN RICHLAND DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml	Date	c/m/ml
1-3	12.2	6-14	1.90
1-4	8.6	6-21	2.02
1-11	6.9	6-28	1.80
1-18	12.4	7-3	1.96
1-25	10.8	7-5	1.60
2-1	7.40	7-12	0.98
2-6	6.40	7-19	2.60
2-8	6.80	7-26	2.20
2-14	5.18	8-2	4.60
2-20	5.0	8-7	3.40
3-1	9.0	8-9	3.10
3-8	4.6	8-16	3.20
3-15	6.0	8-23	6.20
3-22	4.2	8-30	3.70
3-29	4.2	9-5	4.73
4-3	7.4	9-6	5.40
4-4	6.8	9-13	5.60
4-12	5.5	9-20	2.60
4-19	5.2	9-27	3.80
4-21	1.7	10-2	3.00
4-24	8.4	10-4	5.40
4-25	8.2	10-11	5.80
4-26	4.6	10-18	4.60
4-27	5.3	10-25	0.82
4-28	4.6	11-1	4.60
5-1	4.1	11-6	3.40
5-2	2.8	11-8	4.80
5-3	5.0	11-15	6.60
5-8	3.4	11-22	5.40
5-9	4.6	11-29	5.20
5-10	5.0	12-4	2.20
5-11	4.2	12-6	2.90
5-12	3.0	12-13	4.20
5-17	7.2	12-20	3.70
5-24	1.80	12-27	7.00
5-31	2.90		
6-5	2.10		
6-7	0.88		

APPENDIX B
TABLE 7

BETA ACTIVITY IN PASCO DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml	Date	c/m/ml	Date	c/m/ml
1-3	1.35	2-27	1.16	4-21	1.7
1-4	2.16	2-28	1.88	4-24	2.2
1-5	2.36	3-1	3.10	4-25	4.2
1-6	1.30	3-2	2.90	4-26	5.8
1-9	1.84	3-3	2.00	4-27	3.0
1-10	0.96	3-7	1.80	4-28	2.3
1-11	1.58	3-8	1.66	5-1	2.7
1-12	1.60	3-9	1.66	5-2	3.8
1-13	1.80	3-10	2.50	5-3	2.8
1-16	1.26	3-13	1.72	5-4	2.9
1-17	1.48	3-14	1.92	5-5	3.2
1-18	1.71	3-15	3.50	5-8	2.8
1-19	1.64	3-16	1.86	5-9	2.6
1-20	1.64	3-17	2.30	5-10	2.2
1-23	1.32	3-20	1.10	5-11	2.5
1-24	1.22	3-21	1.74	5.12	1.8
1-25	1.16	3-22	1.94	5-15	3.1
1-26	1.63	3-23	1.44	5-16	6.0
1-27	1.40	3-24	1.42	5-17	5.0
1-30	1.21	3-27	2.40	5-18	4.0
1-31	1.35	3-28	3.00	5-19	3.0
2-1	1.50	3-29	2.20	5-22	2.5
2-2	1.46	3-30	1.70	5-23	2.6
2-3	1.24	3-31	1.82	5-24	1.6
2-6	1.26	4-3	1.70	5-25	1.3
2-7	1.08	4-4	10.4	5-26	1.8
2-8	2.02	4-5	6.0	5-29	1.4
2-9	1.66	4-6	3.6	5-31	1.5
2-10	1.36	4-7	2.4	6-1	1.4
2-14	1.80	4-10	3.6	6-5	1.5
2-15	1.24	4-11	3.7	6-6	0.59
2-16	.82	4-12	3.8	6-7	0.62
2-17	1.84	4-13	4.2	6-8	0.62
2-20	1.50	4-14	1.3	6-9	0.49
2-21	1.26	4-17	3.9	6-12	0.96
2-22	1.22	4-18	3.1	6-13	0.82
2-23	1.46	4-19	3.5	6-14	0.96
2-24	1.16	4-20	2.5	6-15	1.26

APPENDIX B
TABLE 7 (Continued)

BETA ACTIVITY IN PASCO DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml	Date	c/m/ml	Date	c/m/ml
6-16	0.86	8-10	2.40	10-4	2.70
6-19	1.44	8-11	2.50	10-5	3.10
6-20	1.46	8-14	1.24	10-6	5.20
6-21	1.86	8-15	2.60	10-9	1.56
6-22	0.96	8-16	2.90	10-10	1.62
6-23	1.14	8-17	3.10	10-11	2.30
6-26	1.32	8-18	3.10	10-12	1.06
6-27	1.14	8-21	3.00	10-13	2.20
6-28	1.38	8-22	2.60	10-16	1.66
6-29	1.20	8-23	3.62	10-17	1.30
6-30	1.00	8-24	3.50	10-18	2.10
7-3	1.56	8-25	4.20	10-19	1.30
7-5	1.20	8-28	2.70	10-20	2.40
7-6	1.50	8-29	3.20	10-23	2.20
7-7	1.50	8-30	2.10	10-24	2.54
7-10	1.36	8-31	4.40	10-25	3.00
7-11	0.98	9-1	3.30	10-26	1.06
7-12	0.98	9-5	1.12	10-27	2.10
7-13	1.06	9-6	1.36	10-30	1.80
7-14	2.20	9-7	2.60	10-31	1.00
7-17	1.46	9-8	4.00	11-1	1.74
7-18	1.80	9-11	1.80	11-2	1.82
7-19	3.40	9-12	1.56	11-3	1.60
7-20	1.80	9-13	2.24	11-6	1.06
7-21	2.40	9-14	3.10	11-7	1.36
7-24	2.60	9-15	2.80	11-8	1.62
7-25	2.00	9-18	1.64	11-9	2.10
7-26	1.40	9-19	2.60	11-10	1.46
7-27	1.44	9-20	1.04	11-13	0.86
7-28	3.10	9-21	1.30	11-14	1.34
7-31	4.00	9-22	1.66	11-15	1.80
8-1	2.00	9-25	2.00	11-16	2.28
8-2	3.08	9-26	2.30	11-17	1.96
8-3	1.64	9-27	1.50	11-18	1.48
8-4	2.12	9-28	2.80	11-19	1.90
8-7	2.72	9-29	2.30	11-22	2.00
8-8	3.20	10-2	2.40	11-27	0.64
8-9	2.60	10-3	0.88	11-28	1.50

APPENDIX B
TABLE 7 (Continued)

BETA ACTIVITY IN PASCO DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml
11-29	1.58
11-30	1.74
12-1	0.76
12-4	0.62
12-5	0.72
12-6	0.42
12-7	0.66
12-8	0.72
12-11	0.80
12-12	1.26
12-13	1.32
12-14	0.92
12-15	0.90
12-18	0.50
12-19	0.25
12-20	0.56
12-21	0.44
12-22	0.78
12-27	0.92
12-28	1.20
12-29	1.78

APPENDIX B
TABLE 8

BETA ACTIVITY IN KENNEWICK DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml	Date	c/m/ml	Date	c/m/ml
1-3	1.65	2-27	0.36	4-20	0.37
1-4	0.70	2-28	0.52	4-21	0.14
1-5	0.64	3-1	4.10	4-24	0.43
1-6	0.58	3-2	0.27	4-25	0.49
1-9	< 0.03	3-3	0.30	4-26	0.40
1-10	< 0.03	3-6	0.33	4-27	0.46
1-11	2.50	3-7	0.32	4-28	0.44
1-12	0.26	3-8	0.27	5-1	0.29
1-13	0.33	3-9	0.39	5-2	0.61
1-16	0.37	3-10	0.37	5-3	0.63
1-17	0.05	3-13	0.23	5-4	0.68
1-18	0.05	3-14	0.37	5-5	0.37
1-19	0.05	3-15	0.41	5-8	0.75
1-20	0.05	3-16	0.53	5-9	0.31
1-23	0.33	3-17	0.35	5-10	0.29
1-24	0.82	3-20	0.31	5-11	0.27
1-25	0.38	3-21	0.37	5-12	0.21
1-26	0.53	3-22	0.29	5-15	0.49
1-27	0.46	3-23	0.30	5-16	0.90
1-30	0.42	3-24	0.28	5-17	0.58
1-31	0.59	3-27	0.34	5-18	0.43
2-1	0.28	3-28	0.47	5-19	0.83
2-2	0.33	3-29	0.25	5-22	0.54
2-3	0.39	3-30	0.28	5-23	0.34
2-6	0.41	3-31	0.41	5-24	0.49
2-7	0.36	4-3	0.34	5-25	0.37
2-8	0.41	4-4	0.58	5-26	0.28
2-9	0.43	4-5	0.55	5-29	0.24
2-10	0.41	4-6	0.51	5-31	0.30
2-14	0.39	4-7	0.39	6-1	0.28
2-15	0.36	4-10	0.32	6-5	0.31
2-16	0.29	4-11	0.58	6-6	0.15
2-17	0.24	4-12	0.49	6-7	0.14
2-20	0.30	4-13	0.46	6-8	0.13
2-21	0.57	4-14	0.73	6-9	0.14
2-22	0.44	4-17	0.40	6-12	0.23
2-23	0.39	4-18	0.62	6-13	0.14
2-24	0.25	4-19	0.37	6-14	0.24

APPENDIX B
TABLE 8 (Continued)

BETA ACTIVITY IN KENNEWICK DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml	Date	c/m/ml	Date	c/m/ml
6-15	0.26	8-10	0.25	10-4	0.18
6-16	0.22	8-11	0.31	10-5	0.29
6-19	0.19	8-14	0.14	10-6	0.38
6-20	0.25	8-15	0.25	10-9	0.22
6-21	0.24	8-16	0.25	10-10	0.31
6-22	0.24	8-17	0.28	10-11	0.24
6-23	0.39	8-18	0.31	10-12	0.46
6-26	0.34	8-21	0.33	10-13	0.22
6-27	0.27	8-22	0.23	10-16	0.24
6-28	0.22	8-23	0.27	10-17	0.29
6-29	0.16	8-24	0.32	10-18	0.28
6-30	0.16	8-25	0.30	10-19	0.30
7-3	0.29	8-28	0.34	10-20	0.24
7-4	0.07	8-29	0.30	10-23	0.20
7-6	0.09	8-30	0.38	10-24	0.45
7-7	0.01	8-31	0.43	10-25	0.28
7-10	0.26	9-1	0.36	10-26	0.17
7-11	0.19	9-5	0.65	10-27	0.26
7-12	0.19	9-6	0.29	10-30	0.24
7-13	0.22	9-7	0.23	10-31	0.17
7-14	0.20	9-8	0.22	11-1	0.21
7-17	0.20	9-11	0.17	11-2	0.23
7-18	0.22	9-12	0.30	11-3	0.36
7-19	0.31	9-13	0.35	11-6	0.16
7-20	0.29	9-14	0.42	11-7	0.26
7-21	0.27	9-15	0.28	11-8	0.16
7-24	0.29	9-18	0.18	11-9	0.21
7-25	0.26	9-19	0.28	11-10	0.19
7-26	0.15	9-20	0.17	11-13	0.26
7-27	0.19	9-21	0.22	11-14	0.39
7-28	0.16	9-22	0.16	11-15	0.29
7-31	0.24	9-25	0.20	11-16	0.49
8-1	0.30	9-26	1.90	11-17	0.27
8-2	0.18	9-27	0.18	11-18	0.24
8-3	0.23	9-28	0.18	11-19	0.45
8-4	0.5	9-29	0.21	11-22	0.32
8-8	0.20	10-2	0.25	11-27	0.16
8-9	0.22	10-3	0.27	11-28	0.42

APPENDIX B
TABLE 8 (Continued)

BETA ACTIVITY IN KENNEWICK DRINKING WATER - 1967
Units of c/m/ml

Date	c/m/ml
11-29	0.46
11-30	0.36
12-1	0.19
12-4	0.11
12-5	0.25
12-6	0.22
12-7	0.19
12-8	0.17
12-11	0.23
12-12	0.39
12-13	0.31
12-14	0.26
12-15	0.14
12-18	0.14
12-19	0.11
12-20	0.28
12-21	0.29
12-22	0.21
12-27	0.31
12-28	0.45
12-29	0.21

APPENDIX C

RADIONUCLIDES IN FISH AND WILD FOWL

APPENDIX C
TABLE 1

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold						
1-12	32	4	0.8	1.9	18	1.1
1-12	45	7	0.5	1.6	21	1.0
1-12	120	6	0.9	2.0	27	0.7
1-12	58	6	-	-	29	-
1-12	160	6	1.0	2.3	30	0.9
1-12	230	4	0.3	0.9	30	0.5
1-12	100	5	0.4	1.0	27	0.9
1-12	180	4	0.4	1.1	33	0.4
1-12	160	8	-	0.5	30	0.4
1-12	250	11	0.5	1.1	35	0.2
1-23	63	3	0.9	2.2	21	0.9
1-23	56	5	1.1	2.3	25	1.0
1-23	79	4	1.0	1.6	21	1.0
1-23	47	4	0.5	1.3	19	0.9
1-23	69	5	0.5	1.7	22	1.1
1-23	96	4	1.0	1.9	24	0.8
1-23	73	6	-	0.3	30	0.5
1-23	35	5	0.5	1.3	21	1.0
1-23	120	4	0.5	0.9	33	0.7
1-23	120	4	1.0	2.0	33	0.5
2-6	54	6	1.3	2.6	25	1.1
2-6	54	6	1.3	3.4	28	1.0
2-6	22	10	1.0	3.4	18	0.9
2-6	94	4	0.8	2.3	18	0.8
2-6	83	9	0.7	1.4	13	1.0
2-6	72	9	0.5	1.3	35	0.7
2-6	51	4	-	-	11	0.4
2-6	140	6	0.5	0.3	23	0.7
2-6	90	5	0.9	1.3	34	1.0
2-6	44	4	1.0	1.5	28	0.8
2-22	180	4	0.7	1.0	28	1.0
2-22	210	4	0.5	1.3	32	0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
2-22	88	5	0.3	0.5	14	0.3
2-22	310	4	0.6	0.4	25	0.7
2-24	85	4	0.6	2.5	17	0.9
2-24	83	7	0.4	0.8	22	0.8
2-24	42	3	0.6	1.4	22	0.8
2-24	150	-	1.3	3.4	28	1.1
2-24	360	-	-	-	39	0.6
2-24	480	8	0.5	-	42	0.5
3-9	30	4	0.9	1.1	16	1.0
3-9	66	5	0.3	1.7	18	1.1
3-9	52	6	0.9	2.1	19	0.9
3-9	180	4	0.6	1.1	24	1.0
3-9	120	4	0.9	1.5	22	1.0
3-9	320	<4	0.6	0.9	24	0.8
3-9	820	39	3.6	1.6	30	3.4
3-20	320	5	<0.3	0.6	26	0.7
3-20	220	5	0.4	0.9	20	0.9
3-20	120	5	0.3	1.3	20	0.9
3-20	230	4	0.5	1.1	24	1.2
3-20	220	4	0.6	0.8	24	1.2
3-20	150	4	<0.3	<0.3	22	0.4
3-20	120	3	0.8	1.2	13	1.2
3-20	250	6	0.6	1.3	15	1.0
3-20	160	4	<0.3	0.7	21	0.4
3-20	420	5	0.3	0.4	9	0.8
4-3	62	5	1.1	2.2	16	0.9
4-3	47	4	1.1	2.9	14	0.8
4-3	34	<3	0.4	1.2	11	0.8
4-3	140	<3	0.4	0.7	21	0.7
4-3	67	6	<0.3	0.4	11	0.4
4-3	56	<4	0.5	1.2	17	1.1
4-3	30	<6	<0.5	<0.6	6	0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
4-3	140	6	<0.4	0.6	19	0.7
4-3	200	5	<0.5	0.9	16	0.8
4-3	280	<4	<0.3	0.7	21	0.9
4-20	22	6	1.0	2.2	18	0.8
4-20	78	5	1.4	3.0	18	0.9
4-20	28	4	0.4	0.9	8	0.4
4-20	18	4	0.5	1.5	16	0.9
4-20	100	8	0.8	1.5	18	1.2
4-20	170	7	-	0.4	11	<0.2
4-20	210	5	0.7	1.9	26	0.9
4-20	280	7	0.3	0.5	23	0.7
4-20	140	7	0.3	<0.4	12	0.4
4-20	250	4	0.5	0.5	21	0.8
5-4	64	6	0.9	2.6	17	0.7
5-4	55	5	1.8	2.9	15	1.3
5-4	260	6	0.5	0.8	17	0.9
5-4	230	4	0.3	0.8	21	0.5
5-4	350	5	<0.3	<0.4	18	0.4
5-4	150	6	0.6	1.3	17	0.8
5-4	100	<5	<0.4	1.2	21	1.1
5-4	220	5	0.4	1.0	17	1.1
5-5	98	6	0.5	0.4	<0.4	0.5
5-5	16	20	0.6	2.2	20	0.9
5-5	110	6	1.2	1.2	15	1.2
5-5	56	4	0.9	0.4	2.0	0.4
5-5	370	5	0.4	<0.4	19	1.2
5-5	270	11	<0.2	<0.3	8.0	<0.2
5-5	640	13	0.5	<0.6	23	0.9
5-18	3	6	-	<0.2	2.5	<0.2
5-18	-	5	-	<0.2	1.7	<0.2
5-18	3	8	<0.2	<0.3	2.4	<0.2
5-18	51	6	1.1	1.9	12	1.0

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
5-18	5	6	<0.3	<0.4	1.6	<0.3
5-18	77	7	0.9	1.2	13	0.8
5-18	40	8	0.5	<0.4	14	0.4
5-18	180	10	1.2	1.5	19	1.0
5-18	250	8	1.1	1.0	25	0.8
5-18	250	8	<0.3	<0.4	12	0.6
5-29	14	3	0.2	0.2	3.8	<0.2
5-29	3.5	3	0.2	0.3	2.6	0.3
5-29	4.4	4	0.5	1.2	18	1.0
5-29	29	4	0.4	1.6	16	0.7
5-29	31	4	0.6	1.5	14	1.1
5-29	51	3	0.6	1.0	9	0.5
5-29	31	3	1.1	2.2	19	0.8
5-29	41	4	0.9	1.0	12	0.3
5-29	25	4	0.6	0.7	18	0.9
5-29	220	<4	0.4	0.7	21	0.6
6-12	150	8	0.9	1.1	18	<0.4
6-12	2	4	0.3	0.8	4.6	0.3
6-12	18	5	0.8	1.8	14	0.9
6-16	2	4	<0.3	0.3	2.1	<0.2
6-16	9	3	0.6	1.3	15	1.4
6-16	56	4	<0.3	0.7	14	0.8
6-16	21	3	0.6	1.2	6.8	0.5
6-16	4	3	0.4	1.1	15	1.1
6-16	4	5			3.1	0.3
6-26	3	2	0.6	2.2	10	1.1
6-26	3	3	0.2	0.9	13	1.3
6-26	2	3	-	0.7	12	0.4
6-26	18	4	0.8	2.2	16	0.9
6-26	8	3	0.9	2.3	13	0.7
6-26	2	3	0.6	1.8	11	1.0
6-26	8	4	0.6	1.8	14	0.7

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
6-26	6	4	0.6	2.0	12	0.8
6-26	13	4	0.3	1.5	13	0.9
6-26	34	3	0.4	1.4	13	0.9
7-10	6	4	-	0.2	2.7	<0.2
7-10	5	3	0.5	1.9	13	0.6
7-10	7	3	0.6	1.7	13	1.2
7-10	8	<2	0.8	2.4	15	1.3
7-10	4	4	0.3	0.6	6.5	0.6
7-10	82	<3	<0.2	<0.3	4.6	<0.2
7-10	18	3	0.7	2.2	13	1.0
7-10	29	<3	0.5	1.9	12	1.0
7-10	4	4	0.6	1.1	8.5	0.7
7-10	1	4	0.3	<0.2	3.6	0.2
7-24	35	5	0.3	1.4	12	0.5
7-24	2	4	-	0.2	2.0	0.2
7-24	4	4	-	<0.2	2.3	<0.1
7-24	33	4	0.3	0.6	3.4	0.4
7-24	8	4	-	0.2	3.3	0.3
7-24	4	2	0.4	0.9	6.8	0.5
7-24	20	4	0.4	0.3	4.4	0.2
7-24	19	4	0.2	0.3	3.6	0.2
7-24	4	4	-	0.2	2.8	0.1
7-24	15	4	0.4	0.8	9.0	0.7
7-31	4	4	0.3	1.1	8.4	0.8
7-31	38	5	0.3	<0.3	5.7	0.4
7-31	34	4	0.3	<0.3	7.4	0.4
7-31	38	4	0.5	0.8	13	1.1
7-31	31	4	0.3	0.2	4	0.3
7-31	88	3	0.7	1.3	13	1.2
7-31	54	6	0.4	0.6	7.1	0.4
7-31	42	4	0.5	<0.3	5.4	0.4
7-31	23	3	0.3	0.3	10	0.7

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
7-31	57	5	0.3	<0.4	20	0.4
8-14	300	4	1.0	1.4	18	1.0
8-14	230	3	0.8	0.2	3.4	0.4
8-14	370	4	1.5	1.8	16	1.2
8-14	150	3	0.9	0.4	5.3	0.7
8-14	180	4	1.4	2.1	9.7	1.2
8-14	220	5	0.5	0.6	6.3	0.4
8-14	260	3	1.0	0.5	15	0.8
8-14	230	4	1.8	2.3	12	1.0
8-14	95	4	0.8	0.6	19	0.8
8-14	35	4	0.3	<0.3	9.5	1.0
8-29	170	3	0.4	0.4	7.6	0.2
8-29	110	4	0.3	0.4	6.2	0.3
8-29	140	4	0.4	0.6	11	0.5
8-29	210	3	1.2	0.9	13	0.3
8-29	200	4	0.8	0.8	17	0.8
8-29	210	<3	0.5	0.7	23	0.8
8-29	230	<4	0.7	0.5	24	0.5
8-29	320	<4	0.5	<0.4	22	0.5
8-29	420	<4	2.0	0.9	27	0.5
8-29	930	5	1.4	0.7	26	0.5
9-11	400	4	0.6	0.6	17	0.3
9-11	250	4	1.1	2.1	16	0.9
9-11	680	4	1.7	1.1	16	0.3
9-11	250	3	0.7	0.9	12	0.4
9-11	230	4	0.6	0.8	12	0.4
9-11	420	2	0.9	1.1	19	0.9
9-11	160	4	0.5	0.4	6.6	<0.2
9-11	260	<3	0.8	1.4	14	0.5
9-11	210	3	0.6	1.5	14	1.1
9-11	410	<4	0.8	<0.4	25	<0.4
9-22	370	5	0.3	3.7	9.8	1.3

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
9-22	230	2	0.9	0.4	11	0.3
9-22	600	5	1.8	2.4	26	0.9
9-22	250	3	1.8	1.9	14	1.3
9-22	1300	9	2.1	1.5	33	0.4
9-22	820	12	2.2	1.8	18	0.8
9-22	960	10	2.5	1.9	21	0.5
9-22	1300	15	7.1	4.2	37	1.0
9-22	360	8	1.6	1.0	17	0.6
9-22	240	4	0.8	0.8	10	0.5
10-9	730	9	2.2	2.8	26	0.4
10-9	250	3	0.4	<0.3	19	<0.2
10-9	160	<3	0.9	0.8	12	0.5
10-9	880	4	2.0	2.2	25	0.8
10-9	440	3	2.0	1.8	27	0.9
10-9	920	4	1.8	1.7	32	0.9
10-9	360	3	2.8	2.7	25	0.8
10-9	680	3	3.3	3.5	32	0.7
10-9	810	4	2.5	2.5	24	0.6
10-9	1200	7	2.7	2.6	39	0.8
10-24	410	<3	2.6	3.5	25	1.1
10-24	480	4	3.2	3.0	26	0.9
10-24	220	<3	0.9	0.9	19	0.7
10-24	690	3	3.5	2.3	31	0.7
10-24	910	<3	1.1	0.8	32	<0.3
10-24	880	5	2.5	2.2	42	0.7
10-24	1000	5	2.4	2.8	31	0.6
10-24	1600	<4	1.4	1.3	44	0.5
10-24	1200	<5	3.1	2.5	45	0.5
10-24	890	<5	3.8	3.3	43	0.8
11-7	180	6	-	<0.3	18	<0.2
11-7	450	7	2.7	2.0	29	1.0
11-7	340	3	2.5	2.2	19	0.8

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
11-7	350	4	2.0	1.7	26	1.0
11-7	260	3	3.1	3.4	26	0.6
11-7	370	3	2.1	2.8	25	0.8
11-7	420	<3	3.7	3.7	21	0.8
11-7	440	3	2.5	2.2	23	0.8
11-7	460	8	2.6	2.7	30	1.0
11-7	710	5	2.4	1.8	44	0.7
11-20	350	3	2.5	3.6	24	0.7
11-20	300	3	2.0	2.4	20	0.8
11-20	410	3	2.1	2.7	22	0.8
11-20	400	4	1.7	2.1	27	0.5
11-20	140	12	<0.4	<0.5	32	<0.3
11-20	350	<4	3.8	5.7	45	0.8
11-20	720	<4	3.4	3.9	39	0.8
11-20	860	<5	2.8	5.4	70	<0.4
11-20	670	6	5.6	7.1	59	0.5
11-20	1000	10	2.2	3.0	60	<0.5
12-4	1500	<4	3.2	4.2	30	1.0
12-4	290	4	1.5	1.7	27	0.8
12-4	820	<4	1.4	1.9	48	1.0
12-4	420	<4	3.4	2.5	35	0.9
12-4	530	<4	1.2	1.4	41	0.6
12-4	760	5	1.2	1.5	38	0.5
12-4	540	<4	2.3	2.2	33	0.7
12-4	460	6	2.4	2.3	34	0.6
12-4	500	4	0.9	1.2	44	0.8
12-4	800	<5	2.5	2.9	40	0.6
12-18	78	4	1.6	2.3	23	1.2
12-18	180	4	3.8	3.6	35	1.1
12-18	150	<2	3.3	3.4	29	1.1
12-18	120	4	0.8	1.7	19	1.0
12-18	140	<3	1.9	3.2	26	0.7

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Ringold (Continued)						
12-18	140	3	1.4	1.7	24	1.2
12-18	230	4	1.5	1.2	28	0.9
12-18	430	6	2.7	2.6	36	1.0
12-18	330	<4	4.4	4.0	33	1.0
12-18	360	<5	2.4	2.3	43	0.8
Priest Rapids						
9-25	-	3			<0.3	<0.2
9-25	770	4	0.5	0.7	42	0.4
9-25	1	4			<0.4	<0.2
9-25	1	3			<0.4	<0.2
9-25	6	5			3.0	<0.3
9-26	-	3			<0.3	<0.2
9-26	4	3			4.1	0.2
9-26	990	3	1.5	1.3	40	0.8
9-27	-	4			<0.3	0.3
9-27	-	4			<0.3	0.2
10-5	2	5			<0.5	<0.3
10-5	790	6			30	<0.4
Burbank						
1-10	2	4			11	0.1
1-10	6	3			12	0.4
1-10	180	3			14	-
2-3	4	4			9.0	0.2
2-3	2	1			7.4	-
10-18	240	2	<18.2	<24.4	15	<0.2
10-18	150	3			18	<0.2
11-21	89	3			15	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
11-21	67	4			17	<0.2
11-21	80	5			18	<0.3
11-21	220	5			29	<0.2
11-21	170	5			26	<0.3
11-21	200	<4			28	<0.3
Island View						
3-16	-	3			5.1	0.3
3-16	-	<4	0.3	1.7	12	1.0
6-14	12	3	-	-	1.8	-
6-14	-	5			0.4	-
6-14	-	3			1.5	-
9-1	107	3	0.2	0.3	5.9	<0.2
9-1	126	3	0.9	0.4	10	0.3
9-1	130	<2	0.5	0.6	6.1	<0.2
9-7	57	4	<0.2	<0.3	4.2	<0.2
9-7	97	2	0.7	0.6	5.4	0.2
9-7	136	<4	0.4	<0.4	6.5	<0.3
9-7	89	4	<0.3	<0.4	8.3	<0.3
9-7	120	-	0.4	<0.3	5.3	0.3
9-7	239	4	0.9	0.5	9.8	0.2
9-7	225	3	0.8	0.7	9.5	0.2
10-11	395	<2	0.7	1.4	14	<0.2
10-11	224	3	1.2	1.6	17	0.4
10-11	518	4	0.6	0.6	17	<0.2
10-25	1	2	-	1.4	11	0.7
10-25	107	3	1.2	1.5	14	0.8
10-25	654	3	1.2	1.0	16	<0.2
10-25	372	3	2.8	2.3	40	<0.2
10-25	1380	3	3.7	2.7	74	<0.2
11-14	39	<3			11	<0.3

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF WHITEFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued)						
11-14	274	<3	1.4	1.5	27	<0.4
11-14	675	<6	0.9	1.9	46	0.6
12-7	2	4			0.6	-
12-7	27	3	-		10	-
12-7	4	3	0.4	0.7	6.5	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 2

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF BASS TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View						
1-19	1	4			5.4	0.3
1-19	-	4			3.1	0.1
1-19	-	1			0.4	0.1
1-19	4	4			16	0.6
2-7	-	2			1.9	-
2-7	-	4			1.6	-
2-7	-	3			7.7	0.1
2-7	-	4			13	0.4
2-9	-	3			0.4	-
2-9	-	3			4.0	-
2-22	51	2			3.9	-
2-22	1	3			1.4	-
2-22	-	3			2.8	0.2
2-22	-	5			1.5	-
2-22	45	4			10	0.2
3-15	-	<6			2.5	<0.5
3-15	3	<5			1.8	<0.4
3-16	-	3			0.9	-
3-16	1	3			2.6	0.2
3-16	-	3			2.0	-
3-16	-	4			1.0	0.1
3-16	-	<4			2.0	<0.3
3-16	-	<3			1.2	<0.2
4-4	-	3			0.7	-
4-4	-	3			0.6	-
4-6	-	3			6.5	<0.2
4-6	1	<4			<0.6	<0.3
4-26	-	3			1.4	<0.2
4-26	-	4			3.4	<0.9
5-25	-	4			0.6	-
5-25	2	3			1.3	0.3
5-25	4	4			1.3	<0.2
5-25	2	3			1.8	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF BASS TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued)						
5-25	-	4			<0.4	<0.2
5-25	1	4			5.6	0.2
5-25	1	3			0.9	-
5-25	-	4			1.8	0.2
7-25	10	5			13	<0.3
7-26	26	8			13	0.7
8-24	48	4			6.8	0.2
10-25	80	5			12	0.6
10-25	4	4			6.2	<0.2
10-25	2	3			2.3	<0.2
11-14	1	<5			4.8	<0.4
11-14	5	3			11	<0.2
12-7	-	3			2.2	<0.2
12-7	5	4			7.6	<0.2
12-7	-	3			1.4	<0.2
12-8	-	3			3.4	<0.2
12-8	-	3			3.9	<0.2
12-8	6	3			11	0.1
12-8	-	4			1.3	<0.2
Burbank						
4-10	-	3			5.2	0.2
4-10	-	4			7.0	0.2
4-11	-	3			6.8	0.3
4-13	-	3			5.0	0.4
4-13	1	3			4.6	-
4-14	-	3			4.6	0.2
4-14	-	4			5.1	0.4
5-2	8	3			5.5	0.4
5-2	-	3			5.5	0.4
5-3	-	3			5.0	0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF BASS TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
5-3	-	3			4.4	0.1
5-3	-	4	-		5.4	0.2
5-23	2	4			7.7	<0.3
5-24	-	4			2.3	<0.2
5-24	-	4			4.8	<0.2
5-24	3	3			1.2	<0.2
5-24	1	<4			6.4	<0.4
6-9	3	<5			9.3	<0.4
9-15	280	4	0.3	0.4	9.2	0.3
10-18	147	3			15	<0.2
Hover						
3-23	1	3			3.6	<0.3
3-28	1	3			5.2	0.4
5-9	2	3			6.2	0.2
5-9	-	3			7.6	<0.2
5-9	3	4			5.4	0.3
5-9	-	<3			7.7	0.7
5-9	-	4			6.2	0.6
5-24	-	3			2.8	0.4
5-24	-	3			4.7	0.5
5-24	2	4			3.2	0.2
5-24	2	3			2.7	0.1
5-24	4	<4			7.2	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View						
1-17	76	5			1.1	0.2
1-17	107	3			4.2	0.2
1-17	-	5			2.7	0.2
1-17	200	-			1.0	0.1
1-17	1	4			1.6	0.4
1-17	-	11			7.9	0.3
1-17	-	2			3.4	-
1-17	-	3			2.4	-
1-17	67	4			2.3	0.2
1-17	-	2			1.3	-
2-9	-	2			2.1	-
2-9	-	2			2.3	-
3-7	-	3			0.9	<0.2
3-8	31	3			1.1	<0.2
3-10	1	3			4.1	0.3
4-5	-	3			1.1	<0.2
4-7	-	2			2.2	0.3
4-7	-	3			4.5	0.4
4-7	-	4			6.3	0.3
4-7	1	3			3.0	0.2
4-7	-	4	<1.0		7.5	1.2
4-7	-	2			1.1	0.1
4-7	-	3			5.9	0.6
4-7	1	3			4.5	0.2
4-7	-	3			5.2	0.5
5-16	-	4			5.5	0.5
5-16	-	2			4.8	<0.2
5-16	3	<4			2.0	<0.3
5-16	5	<4			1.9	<0.4
5-16	6	4			6.0	<0.3
5-16	2	<4			0.9	<0.4
5-16	-	<5			<0.8	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued						
5-16	-	<5			1.6	<0.4
5-16	-	<5			3.0	<0.5
5-16	-	3			1.0	<0.1
6-14	3	4			3.8	0.4
6-14	10	2			6.0	0.4
6-14	-	4			0.5	<0.2
6-15	-	<6			<0.9	<0.5
6-19		5			5.5	<0.3
6-19		4			3.8	<0.3
6-19		<5			4.6	<0.5
6-19	51	<6			8.8	<0.5
7-11	-	<5			<0.7	<0.4
7-12	3	5			4.7	<0.3
7-12	2	<4			2.3	<0.3
7-13	1	3			1.1	0.2
7-28	-	4			1.3	<0.3
7-28	9	<5			2.8	<0.4
8-7	3	<8			2.0	<0.7
8-7	4	<7			2.2	<0.6
8-7	10	<7			5.3	<0.6
8-7	11	<10			4.1	<0.9
8-8	22	<12			11	<1.1
8-8	10	<11			4.4	<1.0
8-10	9	<9			6.1	<0.8
8-11	3	3	-	<0.2	4.4	-
9-5	89	<4			6.6	<0.4
9-5	2	<4			2.4	<0.4
9-5	43	6			6.8	<0.4
9-5	3	<4			2.4	<0.3
9-5	8	<7			6.0	<0.6
9-5	94	<7			5.7	<0.6
9-5	36	<5			3.3	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSLCE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued)						
9-5	451	<7			2.6	<0.6
9-5	7	<6			5.2	<0.6
9-5	302	<6			5.0	<0.6
Burbank						
2-3	-	3			6.7	0.1
2-3	-	3			1.9	-
2-3	-	3			1.1	0.1
2-3	-	3			7.6	0.1
2-3	-	3			3.7	-
2-3	-	3			6.1	-
2-3	-	2			5.2	0.1
2-28	-	3			6.6	-
2-28	-	2			6.8	-
2-28	2	3			3.8	-
3-1	-	4			6.6	<0.2
3-1	-	2			5.1	-
3-1	-	-			5.3	-
3-1	-	4			4.6	-
3-1	-	-			6.8	-
3-1	-	-			7.4	-
3-1	-	3			5.5	-
3-1	-	4			5.8	<0.2
3-1	-	2			5.8	0.2
3-1	-	2			6.0	-
4-11	-	3			4.2	0.2
4-11	-	3			5.6	<0.2
4-11	1	3			5.4	-
4-11	-	3			5.0	<0.2
4-11	-	3			6.4	<0.2
4-11	-	3			5.2	0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
4-11	-	3			4.3	<0.2
4-11	2	3			5.8	<0.2
4-11	2	<3			6.0	0.4
4-11	-	<4			2.5	<0.3
5-3	-	4	-		5.0	0.3
5-3	-	3	-		4.0	-
5-3	2	4			1.5	<0.2
5-3	-	4			1.6	<0.2
5-3	2	3			3.0	-
5-3		3			6.2	0.4
5-3	1	2			4.9	<0.2
5-2	-	2			1.5	0.2
5-2	4	4			5.6	<0.2
5-2	3	3			4.1	0.2
6-6	43	4			7.2	0.6
6-6	32	4			1.1	0.4
6-6	49	3			4.0	<0.2
6-6	1	2			3.6	<0.2
6-6	-	3			5.9	<0.2
6-6	2	4			8.0	0.2
6-6	1	3			5.2	<0.2
6-6	-	4			5.1	0.3
6-6	2	3			4.2	<0.2
6-6	-	2			5.6	<0.2
7-1	8	2			7.1	-
7-1	4	3			7.1	<0.2
7-1	4	4			6.0	-
7-1	12	4			6.8	0.3
7-1	36	4			6.5	-
7-1	5	3			7.7	0.2
7-1	2	4			3.2	-
7-1	2	4			6.4	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
7-1	5	3			5.3	0.2
7-1	15	4			6.2	<0.3
8-18	56	3	-	<0.3	8.5	<0.2
8-18	20	4	<0.3	<0.4	5.5	<0.2
8-18	-	4	<0.3	<0.4	6.0	<0.3
8-18	20	4	-	<0.3	9.3	<0.2
8-18	268	3	-	<0.3	12	<0.2
8-18	-	3	-	<0.2	6.4	<0.2
8-18	84	4	-	<0.2	8.5	<0.2
8-18	32	5	-	<0.3	7.7	<0.2
8-18	17	3	-	<0.2	7.2	-
8-18	56	4	<0.3	<0.4	8.6	<0.3
9-28	55	3	-	<0.2	12	<0.2
9-28	31	4			8.8	-
9-28	44	4			16	<0.2
9-28	56	3			11	<0.2
9-28	52	5			6.6	<0.2
9-28	70	4			12	<0.2
9-28	167	5			13	<0.3
9-28	355	<6			22	<0.5
9-28	122	<6			17	<0.5
10-18	32	2			18	<0.2
10-18	38	4			12	0.2
10-18	40	3			14	-
10-18	6	4			3.6	<0.2
10-18	46	3			10	<0.2
10-18	59	4			12	<0.2
10-18	55	4			16	<0.2
10-18	22	3			8.5	-
10-18	72	3			14	<0.2
10-18	8	4			7.0	<0.2
11-21	20	3			16	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
11-21	10	3			15	<0.2
11-21	6	3			10	<0.3
11-21	8	3			11	<0.2
11-21	18	<3			6.0	<0.3
11-21	13	<5			15	<0.4
11-21	14	<4			10	<0.4
11-21	9	4			10	<0.3
12-29	-	3			7.2	<0.2
12-29	3	3			7.7	<0.2
12-29	2	<3			13	<0.2
12-29	3	3			15	<0.2
Hover						
3-22	-	2			5.9	-
3-22	-	<4			4.5	<0.3
3-24	-	4			8.9	0.4
3-29	-	3			3.5	0.4
4-18	-	<5			5.6	<0.4
4-19	3	<5			4.5	<0.4
4-19	-	<5			5.2	<0.5
4-19	-	4			7.2	<0.2
4-19	2	2			4.1	0.2
4-25	-	3			4.7	<0.2
4-25	2	3			5.3	<0.2
5-9	3	<4			5.4	<0.4
5-9	6	<6			4.4	<0.5
5-9	-	4			5.6	<0.3
5-9	3	<4			3.3	<0.3
5-9	7	<5			4.6	<0.4
5-9	5	<7			4.5	<0.6
5-9	-	2			3.4	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 3 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CATFISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Hover (Continued)						
5-9	2	3			4.8	0.3
5-9	1	3			5.4	0.2
5-9	-	4			3.7	<0.3
6-1	10	<9			7.9	<0.8
6-1	-	<9			7.2	<0.8
6-1	15	<7			6.1	<0.6
6-19	7	5			5.5	<0.3
6-19	12	4			3.8	<0.3
6-19	12	<5			4.6	<0.5
6-19	51	<6			8.8	<0.5
6-20	22	<4			7.8	<0.3
6-20	22	<4			8.3	<0.4
6-20	30	<5			4.0	<0.4
7-6	2	2			5.4	0.2
7-6	23	4			7.0	<0.3
7-6	26	4			7.8	<0.3
7-6	11	<5			6.4	<0.4
7-6	40	<4			7.3	<0.4
7-6	26	<6			6.8	<0.6
7-6	56	<8			9.4	<0.7
8-2	2	3	-	<0.2	4.4	<0.2
8-2	5	5			8.9	<0.3
8-2	16	3	-	<0.3	7.4	<0.2
8-2	18	4	<0.2	<0.3	7.2	<0.2
8-3	55	<6	<0.6	<0.8	7.2	<0.6
8-3	12	<7	<0.7	<0.9	11	<0.6
8-3	76	<7			8.6	<0.4
8-3	60	<4	<0.4	<0.5	6.5	<0.4
8-3	158	<7	<0.6	<0.8	19	<0.6
8-3	127	5	<0.4	<0.5	12	<0.4
10-26	32	<5			15	<0.4
10-26	24	<6			8.8	<0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View						
1-19	2	4			13	0.4
1-19	3	4			13	0.9
1-19	2	5			11	0.4
1-19	239	3			11	0.6
1-19	-	4			9.8	0.2
1-19	-	6			16	0.4
1-19	-	4			5.7	0.3
1-19	163	3			11	0.3
2-22	-	-			5.6	0.5
2-22	-	3			4.8	0.2
2-22	41	4			1.7	-
2-22	88	9			3.8	-
2-22	-	-			6.9	-
2-22	1	-			13	0.4
2-22	-	1			2.0	-
2-22	-	-			3.4	-
2-22	-	4			4.2	-
2-22	-	4			5.9	-
3-8	-	<3			2.3	<0.3
3-8	-	<6			6.2	<0.5
3-10	-	5			1.1	0.5
3-15	1	4			10	1.5
4-7	-	<8			6.6	<0.6
4-7	-	<7			2.8	<0.6
4-7	-	<5			3.2	<0.5
4-25	8	<5			7.3	<0.4
4-25	4	<8			6.0	<0.7
4-28	3	<4			6.6	<0.3
4-28	3	<8			5.7	<0.6
4-28	-	<6			5.9	<0.5
4-28	7	<7			7.8	<0.6
4-28	-	<5			5.9	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued)						
5-15	4	5			7.0	0.3
5-15	14	<6			6.7	<0.5
5-15	3	<5			4.1	<0.4
5-16	-	3			5.7	<0.2
5-16	7	3			8.2	0.6
5-16	2	3			5.9	0.3
5-16	2	<4			6.5	<0.3
5-16	2	<6			4.4	<0.5
5-17	2	3			6.2	<0.2
5-17	3	<6			5.5	<0.6
9-1	-	3			4.9	0.2
9-1	2	<4			2.3	<0.3
9-1	2	3			3.9	<0.2
9-7	3	3			3.7	0.2
9-7	1	4			4.2	<0.2
9-7	348	9			10	<0.4
10-10	64	4	<.24		13	0.3
10-10	123	<4			7.3	<0.3
10-10	138	<5			11	<0.5
10-10	169	<4			18	<0.4
10-10	332	5			29	<0.4
10-10	245	<5			24	<0.4
10-11	18	3			4.8	<0.2
10-11	4	4			2.3	<0.3
10-11	104	<4			13	<0.3
10-25	28	3			6.5	<0.2
10-25	14	3			7.8	<0.2
10-25	12	4			6.6	<0.2
10-25	7	<3			4.6	<0.3
10-25	106	<3			23	<0.3
11-14	5	<10			5.4	<0.9
11-14	77	<6			24	<0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View (Continued)						
11-15	2	4			5.3	<0.2
11-15	11	4			6.3	<0.2
11-15	12	<3			9.6	<0.3
11-15	17	<4			16	<0.3
11-15	27	3			12	<0.3
11-15	48	<4			25	0.4
12-7	1	3			6	<0.2
12-7	40	<3			16	<0.3
12-7	13	<5			14	<0.4
12-7	1	<4			1.6	<0.3
12-7	7	<5			12	<0.4
12-7	2	<6			1.0	<0.5
12-7	25	<4			17	<0.3
12-7	19	<4			12	<0.4
12-8	10	<4			5.9	<0.4
12-8	9	<5			11	<0.4
Burbank						
2-1	1	1			2.1	-
2-1	1	2			8.4	-
2-1	-	1			6.0	-
2-1	-	1			6.1	-
2-28	-	-			10	-
2-28	-	-			8.1	-
2-28	-	-			6.3	-
2-28	-	-			8.9	-
2-28	-	-			8.8	-
3-3	-	3			6.4	<0.2
3-3	-	3			8.8	<0.2
3-3	1	5			10	<0.4
3-16	2	<3			7.8	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
3-16	-	<4			8.0	<0.3
3-16	-	<5			8.0	<0.4
3-16	-	<3			10	0.4
4-10	2	<6			7.7	<0.5
4-11	-	3			5.2	<0.2
4-13	2	<5			5.9	<0.5
5-1	-	<4			5.0	<0.4
5-1	8	4			4.9	<0.3
5-1	3	4			7.0	<0.4
5-1	2	6			5.4	<0.4
5-1	6	<6			8.1	<0.5
5-1	-	<6			8.5	<0.5
5-1	<2	<8			5.3	<0.7
5-1	4	<8			4.7	<0.7
5-2	1	3			6.4	0.3
5-2	-	<4			5.1	<0.4
6-6	43	<4			7.3	0.5
6-6	7	4			7.9	0.4
6-6	-	4			7.8	<0.2
6-6	-	4			6.1	<0.3
6-9	4	4			3.2	<0.3
6-9	-	3			4.4	<0.3
6-9	-	4			3.7	<0.3
6-9	4	<5			7.2	<0.4
7-21	1	4			7.4	0.2
7-21	-	3			6.3	<0.2
7-21	-	<5			7.1	<0.5
7-21	2	4			7.2	<0.3
7-21	5	<3			9.4	<0.3
9-28	74	3			9.0	<0.2
9-28	286	<3			19	0.4
9-28	286	<3			19	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
IN CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
9-28	314	4			23	<0.2
9-28	503	<3			28	<0.2
10-18	186	4			20	0.3
10-18	218	3			25	<0.3
10-18	218	<4			27	<0.4
10-18	300	<3			24	<0.3
10-18	131	<5			13	<0.4
11-21	16	4			13	0.2
11-21	34	3			17	<0.2
12-29	6	3			19	<0.2
12-29	7	<3			20	<0.3
Hover						
4-17	2	<4			9.1	0.3
4-17	2	4			10	0.4
4-17	3	<7			8.7	<0.6
4-18	2	3			10	0.3
4-18	1	4			7.4	<0.3
4-18	1	4			5.5	<0.3
4-18	2	<4			8.6	0.5
4-18	-	<5			11	<0.4
4-18	-	5			9.4	<0.3
4-18	2	<5			10	<0.4
5-9	-	3			8.5	0.4
5-9	3	<3			11	0.3
5-9	2	<4			9.2	<0.4
5-9	-	<5			7.3	<0.5
5-9	-	<4			4.6	<0.4
5-9	-	<6			8.9	<0.5
5-9	2	<6			12	0.6
5-9	5	<6			12	<0.6

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 4 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE
OF CRAPPIE TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Hover (Continued)						
5-9	12	7			12	<0.6
5-9	9	<5			7.5	<0.4
6-30	4	4			8.4	0.3
6-30	7	<5			4.4	<0.5
6-30	30	4			13	0.5
6-30	10	<7			12	0.7
6-30	35	<5			12	<0.4
7-6	13	3			11	0.3
7-6	10	<4			4.0	<0.4
10-26	269	<5			36	<0.4
10-26	153	<7			33	<0.6

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 5

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF PERCH TAKEN FROM THE COLUMBIA RIVER - 1967

Units of picocuries per gram

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Island View						
1-18	268	4			13	-
1-18	174	7			20	0.5
4-6	-	<9			8.7	<0.8
7-11	3	<5			4.7	<0.4
7-12	31	5			9.7	<0.3
7-12	27	5			7.5	<0.3
7-12	15	5			7.0	<0.3
7-13	27	4			7.4	<0.3
7-28	3	<4			7.0	<0.4
8-9	40	6			5.7	<0.5
8-9	160	<6			19	<0.6
9-6	9	-			4.5	<0.5
9-6	4	<5			5.7	<0.4
9-6	8	<5			6.1	<0.4
10-10	81	<9			6.9	<0.8
10-11	65	6			8.0	<0.5
12-7	3	<7			11	<0.6
12-7	2	<7			6.8	<0.6
12-8	7	<8			13	<0.7
Burbank						
1-10	-	2			9.1	-
1-10	5	2			15	-
1-10	-	3			10	-
1-10	2	5			14	-
1-10	-	3			8.9	0.1
1-11	1	3			7.9	-
1-11	-	3			5.8	-
1-11	2	4			12	-
1-11	2	2			8.6	-
1-11	-	2			7.6	0.1
2-1	2	4			11	-
2-1	-	3			8.5	-
2-1	-	6			10	0.3
2-1	LOST	3			5.1	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 5 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF PERCH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of picocuries per gram

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
2-1	-	2			4.0	-
2-1	4	12			36	2.5
2-1	1	3			11	-
2-1	1	-			6.5	-
2-1	1	-			7.7	-
2-1	-	3			7.1	-
3-1	-	-			7.3	0.6
3-1	-	-			8.0	0.4
3-1	-	-			7.7	0.3
3-1	-	-			6.6	0.6
3-1	-	-			7.5	-
3-1	-	-			3.8	-
3-1	-	-			6.9	-
3-1	-	-			4.8	-
3-1	-	-			5.0	-
3-1	-	-			7.5	-
4-10	-	6			4.9	<0.4
4-10	-	<6			6.3	<0.5
4-10	-	<5			4.8	<0.5
4-11	-	<5			5.2	0.4
4-11	-	<7			7.3	<0.6
4-11	-	<8			7.9	<0.7
4-11	-	<5			6.5	<0.4
4-11	-	<6			4.2	<0.5
4-11	-	<6			4.0	<0.5
4-11	-	<5			5.9	<0.4
5-2	-	6			5.3	<0.5
5-2	-	<7			4.4	<0.6
5-2	1	<6			9.1	<0.6
5-2	2	<8			5.6	<0.7
5-2	5	<8			9.1	<0.7
5-2	3	<8			6.5	<0.7
5-2	-	<7			6.8	<0.6
5-2	5	<10			9.9	<0.9

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 5 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF PERCH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of picocuries per gram

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Burbank (Continued)						
5-2	-	<8			5.3	<0.7
5-2	-	<8			4.9	<0.6
6-5	5	4			5.5	<0.3
6-5	33	4			6.7	<0.3
6-5	1	<3			5.9	<0.3
6-5	5	<4			8.6	<0.3
6-5	8	<5			8.6	<0.4
6-5	3	5			10	<0.4
6-5	3	<4			6.8	<0.3
6-5	-	5			6.8	<0.3
6-5	-	5			7.1	<0.2
6-5	19	5			9.7	0.3
7-21	2	<3			8.0	0.3
7-21	5	5			6.0	<0.4
7-21	4	<4			5.6	<0.4
7-21	7	4			7.2	<0.3
7-21	7	<4			6.4	<0.4
7-21	8	<4			6.9	<0.3
8-18	93	<6			7.5	<0.5
8-18	83	<5			5.8	<0.4
8-18	178	<7			13	<0.6
8-18	197	<6			10	<0.5
8-18	186	<5			10	<0.4
8-18	176	<4	<0.4	<0.4	9.3	<0.3
8-18	165	<4			9.7	<0.3
8-18	172	<3			9.4	<0.3
8-18	233	3			11	<0.3
8-18	176	<3			8.9	<0.3
10-18	114	<5			17	<0.5
10-18	53	<5			9.9	<0.4
11-21	6	<4			7.7	<0.3
11-21	7	<7			11	<0.6
11-21	20	<5			13	<0.4
11-21	16	<5			12	<0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 5 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF PERCH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of picocuries per gram

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Hover						
1-5	4	3			15	-
1-5	1	3			38	-
1-5	14	3			42	-
2-17	1	-			7.8	-
2-17	1	5			7.6	0.3
2-17	1	3			12	0.2
2-17	2	2			15	-
2-17	189	-			11	0.1
3-22	-	4			6.3	<0.4
3-22	9	<8			8.6	<0.7
3-22	14	<8			8.9	<0.7
3-22	2	<7			7.4	<0.6
3-22	6	<8			8.2	<0.7
3-22	7	<10			6.3	<0.8
3-22	7	<6			8.1	<0.5
3-28	42	<5			8.4	<0.4
3-28	-	<7			7.6	<0.6
4-18	5	<8			6.4	<0.7
4-18	1	<11			8.5	<1.0
4-18	3	<8			7.5	<0.7
4-19	2	<5			11	0.7
4-19	5	<6			9.4	<0.6
4-19	4	<14			10	<1.2
4-19	1	<16			8.0	<1.3
4-25	5	5			1.2	<0.4
4-25	5	<4			9.0	<0.4
5-9	-	<5			4.7	<0.5
5-9	8	<5			7.0	<0.4
5-9	2	<9			9.3	<0.8
5-9	-	<9			7.6	<0.8
5-9	5	<12			7.2	<1.0
5-9	14	<9			9.5	<0.8
5-30	94	<5			11	<0.4
5-31	58	<4			10	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 5 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF PERCH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of picocuries per gram

Date	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit	1	1	0.2	0.2	0.2	0.1
Hover (Continued)						
6-2	76	<4			9.3	<0.4
6-2	56	3			10	0.3
6-19	80	<4			11	<0.3
6-19	60	5			10	0.4
6-19	51	<5			10	<0.4
6-20	41	<4			7.4	<0.3
6-20	102	5			13	<0.3
6-30	31	<5			8.5	0.4
7-5	51	3			7.4	<0.3
7-5	39	<5			10	<0.4
7-5	61	<5			9.6	<0.4
7-5	40	<4			11	<0.3
7-5	30	5			9.7	<0.4
7-5	53	<5			10	<0.4
7-5	75	5			10	<0.4
7-5	44	4			9.2	<0.3
7-5	50	5			11	<0.4
7-5	48	4			7.2	<0.4
8-1	78	<7	<0.7	<0.9	13	<0.6
8-1	87	<7	<0.7	<0.9	12	<0.6
8-1	68	<7	<0.6	<0.8	13	<0.6
8-1	81	<6	<0.6	<0.8	10	<0.6
8-1	65	<4	<0.4	<0.5	11	<0.4
8-4	68	6	<0.4	<0.5	13	<0.4
8-4	58	5	<0.4	<0.5	13	<0.4
8-4	56	<7	<0.6	<0.8	12	<0.6
8-4	84	<6	<0.5	<0.7	11	<0.5
8-4	72	<5	<0.4	<0.6	13	<0.4
11-17	13	<5			11.9	<0.5

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 6

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF
MISCELLANEOUS FISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	Specie	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit		1	1	0.2	0.2	0.2	0.1
Burbank							
2-1	Carp	-	2			9.8	-
2-1	Carp	34	3	-		34	0.2
2-1	Carp	2	2			21	-
4-10	Bluegill	2	<9			5.9	<0.8
5-3	Carp	-	2			10	-
5-3	Carp	15	3	-		26	<0.2
5-3	Carp	6	3			8.5	<0.2
8-15	Carp	90	3			21	0.3
8-15	Carp	72	4			14	<0.2
8-15	Carp	48	3			6.9	<0.2
9-28	Squawfish	7	4			4.0	0.2
9-28	Squawfish	28	4			6.8	<0.2
9-28	Squawfish	20	4			4.3	<0.2
9-28	Sucker	31	4			10	0.4
9-28	Sucker	517	4	-	<0.2	16	0.2
9-28	Sucker	264	3	-	<0.2	13	-
9-28	Carp	199	4			70	-
9-28	Carp	90	3			27	<0.2
9-28	Carp	83	4			23	<0.2
10-18	Squawfish	11	<6			10	<0.5
10-18	Sucker	212	4			13	0.3
10-18	Sucker	26	4			4.1	<0.2
10-18	Sucker	183	3			16	<0.2
10-18	Carp	13	4			28	<0.3
10-18	Carp	153	2	<0.2		59	<0.2
10-18	Carp	69	<3			28	<0.3
11-21	Sucker	66	4			14	0.2
11-21	Sucker	24	2			9.9	-
11-21	Sucker	15	3			9.3	0.3
11-21	Carp	41	3			54	-
11-21	Carp	15	3			18	-
11-21	Squawfish	8	<2			12	0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 6 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF
MISCELLANEOUS FISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	Specie	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit		1	1	0.2	0.2	0.2	0.1
Island View							
2-22	Bluegill	-	-			4.2	0.1
2-22	Bluegill	-	-			2.9	-
3-7	Carp	-	4			24	<0.2
3-7	Carp	-	3			14	<0.2
3-7	Carp	-	2			4.0	<0.2
3-7	Carp	-	<9			2.6	<0.8
3-7	Bullhead	-	<9			2.4	<0.8
4-7	Bluegill	-	<6			<0.9	<0.5
4-7	Bluegill	-	<5			2.3	<0.4
6-15	Carp	3	4			1.7	<0.2
6-15	Carp	-	4			5.3	<0.2
6-15	Carp	2	5			1.2	<0.2
9-1	Carp	-	3			3.3	<0.2
9-1	Carp	-	3			12	0.2
9-1	Carp	114	2			12	<0.2
9-6	Shad	34	4			2.1	<0.2
9-6	Shad	99	4			7.9	<0.2
9-8	Squawfish	85	8	<0.2	<0.3	8.5	1.1
9-8	Squawfish	61	6	0.2	<0.3	9.8	1.1
9-8	Squawfish	131	5	<0.3	<0.3	14	0.8
10-10	Bullhead	4	<10			4.0	<0.8
10-11	Carp	-	3			0.4	<0.2
10-11	Carp	-	3			0.3	<0.2
10-11	Carp	2	3			4.7	<0.2
10-11	Sucker	100	5			12	<0.2
10-11	Sucker	385	4	<0.2		19	0.3
10-11	Sucker	181	4			8.9	0.4
10-11	Sturgeon	7	<4			5.2	<0.3
10-11	Bullhead	96	<6			3.7	<0.5
10-11	Bullhead	20	<6			5.0	<0.5
10-11	Bullhead	6	<8			4.9	<0.7
10-11	Bullhead	2	<4			2.0	<0.4
10-25	Bullhead	-	<4			1.6	<0.4

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 6 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF
MISCELLANEOUS FISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	Specie	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit		1	1	0.2	0.2	0.2	0.1
Island View (Continued)							
10-25	Bullhead	2	<5			2.8	<0.4
10-25	Bullhead	27	<4			5.8	<0.3
10-25	Bullhead	2	5			2.9	<0.4
10-25	Sturgeon	36	<2			13	<0.2
10-25	Squawfish	21	3			2.7	0.2
10-25	Squawfish	63	3			17	1.5
11-14	Sturgeon	50	5			12	0.2
11-15	Carp	-	<3			3.8	<0.2
11-15	Carp	-	3			1.6	<0.2
11-15	Carp	-	3			7.6	<0.2
11-15	Sturgeon	19	2			3.8	<0.2
11-15	Bullhead	-	<6			<0.9	<0.5
11-15	Bullhead	-	<7			2.4	<0.6
11-15	Bullhead	-	<7			1.6	<0.6
11-15	Bullhead	-	<4			3.2	<0.4
12-8	Carp	31	2	<0.2		38	<0.2
12-8	Carp	17	4			17	0.3
12-8	Carp	-	3			3.4	<0.2
Priest Rapids							
9-26	Sucker	2	4			3.1	0.4
9-26	Squawfish	-	3			<0.4	0.6
9-26	Squawfish	4	4			1.7	<0.2
9-26	Squawfish	7	4			1.6	0.3
9-27	Carp	-	3			<0.3	<0.2
10-5	Sucker	245	3	<0.2	<0.2	7.7	0.6
10-6	Steelhead	-	3			<0.3	<0.2
10-5	Salmon	-	3			1.3	-
10-5	Salmon	186	19	1.3	0.6	3.4	1.1
10-6	Sturgeon	10	6			17	
10-6	Sucker	1	3			0.7	
10-6	Sucker	-	4			5.2	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 6 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MUSCLE OF
MISCELLANEOUS FISH TAKEN FROM THE COLUMBIA RIVER - 1967
Units of pCi/g

Date	Specie	^{32}P	^{40}K	^{58}Co	^{60}Co	^{65}Zn	^{137}Cs
Analytical Limit		1	1	0.2	0.2	0.2	0.1
Priest Rapids (Continued)							
10-6	Squawfish	2	3			0.8	
10-6	Squawfish	52	3			2.2	
10-6	Squawfish	2	3			0.5	
Hover							
1-4	Carp	11	4			12	-
1-4	Carp	8	2			11	-
1-4	Carp	4	3			9.0	-
3-28	Bluegill	5	<7			4.4	<0.6
3-29	Bluegill	3	<8			7.8	<0.6
3-29	Bluegill	6	<6			3.8	<0.5
4-18	Bluegill	2	3			22	<0.2
4-18	Carp	5	3			25	<0.2
4-18	Carp	5	4	<0.2	<0.2	24	<0.2
7-6	Carp	18	3			17	<0.2
7-6	Carp	25	3			23	0.2
7-6	Carp	28	4			19	-
10-26	Squawfish	12	3			5.9	0.4
11-17	Carp	5	3			2.1	<0.2
11-17	Carp	27	<4			31	<0.3
11-17	Squawfish	2	<3			6.5	0.4
Coyote Rapids							
10-30	Steelhead	1	4			0.3	-
10-30	Steelhead	-	4			0.9	<0.2
10-30	Steelhead	-	4			<0.2	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Upper River									
1-12	Mallard	30	2.8	22	-	25	2.9	12	-
1-12	Mallard	-	1.6	4.5	-	-	3.0	1.7	-
1-12	Mallard	24	3.7	14	-	3.9	3.7	7.6	-
1-12	Mallard	84	1.4	5.7	-	110	12	2.9	0.80
1-12	Mallard	5.6	3.8	10	-	10	2.7	5.5	-
1-23	Mallard	4.1	2.6	32	-	22	2.7	21	-
1-23	Mallard	2.4	2.7	11	-	22	4.2	5.6	-
1-23	Mallard	41	3.9	7.9	-	1.5	2.9	3.0	-
1-23	Mallard	40	2.3	11	-	-	2.6	6.2	-
1-23	Mallard	41	1.7	13	-	1.4	2.4	6.5	-
1-23	Mallard	2.1	2.7	19	-	-	2.3	10	-
1-23	Mallard	-	1.6	5.8	-	1.7	2.9	3.6	-
1-23	Mallard	-	2.6	6.5	0.13	-	3.6	2.7	-
1-23	Mallard	-	1.8	9.8	0.10	2.5	3.8	5.7	-
1-23	Mallard	-	2.0	8.3	-	2.7	3.3	5.2	-
9-26	Merganser	360	<3.6	8.4	<0.3	300	4.2	3.6	<0.2
9-26	Merganser	44	<3.3	1.8	<0.3	52	3.8	1.1	<0.14
10-4	Mallard	2500	3.8	200	0.3	590	3.0	64	<0.2
10-4	Mallard	2100	<3.6	190	0.3	560	3.1	66	<0.2
10-4	Merganser	3100	22	120	0.6	900	4.0	14	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head ^{32}P	Head ^{40}K	Head ^{65}Zn	Head ^{137}Cs	Muscle ^{32}P	Muscle ^{40}K	Muscle ^{65}Zn	Muscle ^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Upper River (Continued)									
10-4	Merganser	2600	<3.5	150	0.5	1900	3.4	56	<0.2
10-12	Coot	56	<7.7	2.4	<0.7	0.8	4.0	<0.6	<0.3
10-19	Scaup duck	1.5	<6.4	<1.0	<0.6	0.8	<3.5	<0.6	<0.3
10-19	Widgeon	25	<6.5	2.6	<0.6	13	<3.0	<0.5	<0.3
10-19	G. W. Teal	38	<7.9	10	<0.7	70	<4.2	4.3	<0.4
10-19	G. W. Teal	140	<9.5	2.4	<0.8	260	<4.7	1.1	<0.4
10-30	Mallard	48	<2.9	8.8	<0.2	18		3.8	<0.2
10-30	Mallard	250	<2.7	120	2.2	160	4.3	58	<0.5
10-30	Mallard	48	<3.8	5.9	<0.3	14	2.6	1.9	<0.2
10-30	Mallard	36	<3.2	4.9	<0.3	8.9	2.9	1.7	<0.2
10-30	Mallard	73	<3.6	31	<0.3	77	3.3	9.5	0.4
10-30	Gadwall	180	4.4	7.8	0.7	4.8	4.7	1.7	0.9
10-30	Coot	470	<12	24	<1.0	510	10	12	<0.4
10-30	Coot	23	<9.9	5.7	<0.8	9.2	3.7	1.5	<0.3
10-30	Coot	630	<9.3	24	<0.8	94	4.8	5.8	<0.4
11-1	Merganser	1300	<6.8	76	<0.6	1400	<6.7	51	<0.6
11-1	Mallard	97	<2.6	19	<0.2	56	4.4	10	<0.13
11-1	Lesser Goose	81	<4.0	9.6	<0.3	2.2	2.7	0.3	<0.14
11-6	Mallard	2.0	<3.6	2.6	<0.3	1.7	3.0	<0.4	0.5
11-6	Mallard	110	<3.6	3.6	<0.3	22	2.7	<0.4	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Upper River (Continued)									
11-8	Lesser Goose	46	3.1	7.2	<0.2	10	3.3	2.4	<0.2
11-8	Golden Eye	590	<3.4	14	0.4	390	3.6	4.9	0.9
11-8	Golden Eye	220	4.6	11	0.3	140	5.0	2.9	0.5
11-8	Mallard	270	<2.8	8.6	<0.2	310	3.3	3.4	<0.2
11-3	Merganser	33	<2.5	3.6	<0.2	29	3.7	1.5	<0.2
11-3	Widgeon	220	<6.4	25	<0.6	71	4.4	16	0.2
11-3	Widgeon	120	<7.3	21	<0.6	52	3.8	11	<0.2
11-3	Mallard	28	3.0	4.1	<0.3	9.0	5.1	1.2	<0.2
11-22	C. Honker	-	<1.9	6.4	<0.2	-	2.8	4.0	<0.2
11-27	Widgeon	780	<5.6	8.5	3.0	970	3.5	5.0	2.6
11-27	Coot	67	<9.0	3.6	<0.8	19	3.3	<0.4	<0.2
11-27	Golden Eye	3100	<4.1	130	3.1	2300	15	78	<0.9
11-27	Golden Eye	2900	3.8	180	2.6	2100	24	70	1.2
11-27	Golden Eye	2000	<3.9	84	1.4	1700	8.2	45	0.8
11-27	Mallard	180	<4.4	4.8	0.4	74	2.8	<0.5	<0.3
11-27	Mallard	400	5.7	27	0.4	520	5.2	15	<0.2
11-27	Mallard	80	<3.2	12	<0.3	62	2.8	4.7	<0.2
11-27	Mallard	130	<3.3	14	<0.3	91	4.3	8.0	<0.2
11-27	C. Honker	51	2.5	14	<0.2	4.6	3.7	4.2	0.2
12-19	C. Honker	41	<2.1	20	<0.2	-	3.9	9.8	0.7

Results less than analytical limit indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Lower River									
9-27	Widgeon	81	<5.7	99	<0.5	110	3.2	62	0.4
9-27	Widgeon	180	<3.7	45	<0.3	78	3.4	20	<0.2
10-2	Mallard	68	5.5	5.1	<0.2	5.8	4.5	1.0	<0.2
10-4	Mallard	280	<3.0	14	<0.3	130	3.1	6.6	<0.2
10-9	Coot	130	-	10	<0.9	120	5.1	5.9	<0.4
10-12	Mallard	190	<3.2	5.4	<0.3	1.8	3.9	0.3	<0.1
10-12	Goose	200	<3.8	73	0.4	150	3.4	36	<0.1
10-17	Mallard	1.6	<3.3	1.9	<0.3	1.2	<2.6	0.8	<0.2
10-24	Coot	2.7	< 12	1.8	<1.0	31	<3.8	<0.6	<0.3
10-24	Coot	2.7	<9.8	2.1	<0.8	3.6	<4.1	<0.6	<0.4
10-24	Coot	66	<9.3	4.3	<0.8	6.0	<3.7	0.8	<0.3
10-24	Coot	4.7	<10	2.3	<0.9	3.0	<4.1	<0.6	<0.4
10-24	Coot	4.3	<10	2.4	<0.9	4.4	<3.6	<0.6	<0.3
10-24	Mallard	200	<3.5	15	<0.3	230	<2.9	6.1	<0.2
10-24	Mallard	130	<3.0	6.8	<0.3	110	2.6	2.1	<0.2
10-24	Mallard	60	<3.3	1.7	<0.3	-	3.4	<0.4	0.7
10-24	Mallard	21	3.1	1.4	<0.2	-	2.5	<0.3	<0.2
10-24	Mallard	20	<2.9	2.0	<0.2	2.2	3.7	<0.3	<0.2
10-26	Mallard	2.7	<4.0	0.7	<0.4	2.1		<0.4	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head ^{32}P	Head ^{40}K	Head ^{65}Zn	Head ^{137}Cs	Muscle ^{32}P	Muscle ^{40}K	Muscle ^{65}Zn	Muscle ^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Lower River (Continued)									
10-31	Mallard	33	<2.7	10	<0.2	48	2.8	4.0	<0.2
11-7	Mallard	39	<2.6	7.1	<0.2	37	3.1	4.0	<0.2
11-7	Mallard	22	<2.8	1.2	<0.2	23	2.5	<0.4	<0.2
11-7	Mallard	180	<2.8	8.1	<0.2	150	2.9	3.3	<0.2
11-7	Mallard	92	<2.8	6.4	<0.2	50	3.8	2.1	<0.2
11-7	Mallard	730	3.6	31	<0.2	910	3.4	16	<0.2
11-7	Mallard	32	<2.8	4.2	<0.2	12	2.6	3.1	<0.2
11-7	Mallard	64	<3.0	2.9	<0.3	54		0.8	<0.2
11-7	Mallard	61	<3.0	3.6	<0.3	51	2.8	1.0	<0.2
11-7	Mallard	72	<3.1	2.0	<0.3	9.1	3.2	<0.4	<0.2
11-7	Mallard	35	<3.3	4.5	<0.3	5.3	3.0	1.7	<0.2
11-7	Mallard	140	<3.3	5.3	<0.3	85	2.8	2.1	<0.2
11-7	Mallard	150	<3.6	10	<0.3	180	3.2	5.7	<0.2
11-21	Widgeon	20	<5.6	4.7	<0.5	23	3.5	2.7	<0.2
11-27	Mallard	110	<3.1	8.9	<0.3	28	4.2	4.2	<0.2
11-27	Mallard	98	<3.5	11	<0.3	67	4.0	5.9	<0.2
11-27	Mallard	140	<2.9	2.8	<0.2	96	5.1	1.0	<0.2
11-27	Teal	97	<8.6	28	<0.7	89	<3.9	10	<0.3
11-27	Teal	340	<7.5	32	<0.6	180	<3.3	12	<0.3

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Lower River (Continued)									
11-29	Mallard	48	4.6	2.4	<0.3	27	2.3	<0.3	<0.2
11-29	Mallard	48	<2.8	19	<0.2	45	<1.7	9.5	<0.2
11-29	Mallard	36	4.0	8.9	<0.3	24	3.4	4.1	<0.14
11-29	Mallard	86	<2.9	16	<0.2	71	3.6	9.6	<0.13
11-29	Mallard	100	<3.6	5.6	<0.3	43	3.3	2.5	<0.2
11-29	Mallard	73	<2.8	12	<0.2	81	3.7	8.3	<0.2
11-29	Mallard	53	<3.1	1.6	<0.3	3.3	2.9	0.2	<0.12
11-29	Mallard	-	<3.1	1.4	<0.3	4.2	5.4	<0.4	0.5
11-29	Mallard	32	<3.4	6.9	<0.3	6.8	3.5	4.9	<0.2
11-29	Mallard	140	<2.8	23	<0.2	200	2.4	11	<0.2
12-4	Mallard	75	<2.7	6.6	0.3	51	2.4	3.8	<0.2
12-4	Mallard	7.6	<3.6	2.6	<0.3	12	3.1	1.2	<0.2
12-4	Mallard	130	<3.5	12	<0.3	37	2.7	6.4	<0.2
12-4	Mallard	240	<4.0	6.6	<0.4	11	<2.9	1.5	<0.2
12-4	Mallard	-	<3.5	1.1	<0.3	1.5	3.0	<0.4	<0.2
12-4	Mallard	60	<3.4	13	<0.3	58	3.4	7.5	<0.2
12-4	Mallard	93	<3.8	3.9	<0.3	27	<2.5	1.1	<0.2
12-4	Mallard	-	<3.0	2.2	<0.3	-	3.3	0.8	0.2
12-4	Mallard	1.8	<3.4	2.3	<0.3	1.6	3.4	0.7	<0.2
12-4	Mallard	28	<3.0	6.4	<0.2	4.6	3.4	3.2	<0.2
12-4	Mallard	57	<3.0	3.0	<0.2	1.7	4.3	0.9	0.3
12-4	Mallard	38	<3.0	2.5	<0.2	23	2.7	0.8	<0.2

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Lower River (Continued)									
12-4	Mallard	62	<2.8	4.2	<0.2	22	2.8	2.5	<0.2
21-4	Mallard	45	<2.8	7.2	<0.2	42	2.6	4.2	<0.2
12-4	Mallard	31	<2.6	6.4	<0.2	44	3.1	4.0	<0.2
12-4	Mallard	33	<3.1	3.6	<0.2	1.5	2.9	1.8	<0.2
12-4	Mallard	45	<2.7	5.8	<0.2	10	3.8	3.2	<0.2
12-4	Mallard	28	<2.6	1.3	<0.2	2.9	3.1	0.5	<0.2
12-4	Mallard	60	<2.9	6.0	<0.3	11	3.4	3.0	<0.2
Othello									
1-2	Mallard	-	2.2	0.35	-				
1-2	Mallard	120	2.9	1.2	0.2				
1-2	Mallard	-	1.8	0.99	-				
1-2	Mallard	8.3	1.9	0.67	-				
1-2	Mallard	45	1.9	2.7	0.1				
1-2	Mallard	120	2.3	8.9	-				
1-15	Mallard	-	1.0	3.3	-				
1-15	Mallard	2.9	7.1	6.0	0.14				
1-15	Mallard	120	2.0	11	-				
1-15	Mallard	-	2.2	5.5	-				
1-15	Mallard	110	1.3	13	-				

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 7 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN WATERFOWL SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Date	Specie	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit		1.0	1.0	0.2	0.1	1.0	1.0	0.2	0.1
Redox									
1-20	L. Scaup	7.0	24	.72	.01	7.0	21.5	0.3	-
1-20	Mallard	50	3.6	9.1	9.7	4.4	6.8	5.7	68
11-10	Shoveler	1.4	< 5.0		54	52	< 2.7	0.8	160
11-10	Mallard	88	< 3.5	1.2	46	23	2.9	<0.23	63
B Swamp									
10-20	Coot	7.3	<11	<1.7	<0.9	1.9	< 5.9	<0.9	<0.5
11-10	Mallard	25	2.9	<0.4	18	-	3.7	<0.2	2.8
11-10	Coot	-	<10	<1.5	5.8	-	< 6.5	<1.0	9.0
11-10	Coot	3.4	<7.1	<1.1	3.0	1.7	< 5.5	0.9	4.6
Gable Mt.									
10-20	Scaup Duck	55	<6.1	<0.9	39	-	6.9	<0.9	31
10-20	Coot	3.2	16	1.7	100	3.4	26	1.1	160
10-20	Coot	48	<10	3.6	44	21	14	2.2	70
11-10	Coot	790	13	110	64	680	14	100	61
U Swamp									
10-20	Mallard	32	<2.9	<0.4	42	-	< 4.2	<0.6	20
10-20	Coot	8.2	< 9.8	1.8	140	4.8	< 5.6	1.1	240
10-20	Widgeon	2.1	< 5.5	<0.8	73	29	< 3.6	<0.6	160
11-10	Widgeon	-	< 6.5	1.1	62	43	2.5	<0.4	170
Burbank									
9-27	C. Honker	23	< 2.4	42	0.28	22	3.1	43	<0.11

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX C
TABLE 8

CONCENTRATIONS OF RADIONUCLIDES IN UPLAND GAME BIRD SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Species Date	Head ^{32}P	Head ^{40}K	Head ^{65}Zn	Head ^{137}Cs-^{137m}Ba	Muscle ^{32}P	Muscle ^{40}K	Muscle ^{65}Zn	Muscle ^{137}Cs-^{137m}Ba
Analytical limit	1	1	0.2	0.1	1	1	0.2	0.1
CHUKAR								
Priest Rapids								
9-26	0.57	2.43	1.73	ND	1.63	4.10	0.23	0.09
9-27	6.42	4.63	1.65	ND	3.36	3.86	0.12	0.04
10-5	13.9	3.02	2.74	0.09	5.59	4.27	0.58	0.11
10-5	11.1	3.23	1.84	0.12	5.34	3.73	0.66	0.07
10-5	16.2	2.42	1.74	0.29	6.54	2.59	0.26	0.06
10-5	13.8	4.55	3.05	0.50	5.97	3.43	0.43	ND
12-12	<1.0	1.41	ND	ND	5.50	3.65	ND	ND
Hanford								
10-12	1110.	3.87	112.	0.22	1080.	3.06	28.2	ND
10-12	1240.	6.42	152.	0.11	983.	3.40	34.5	0.13
10-12	956.	4.30	89.7	ND	899.	2.07	20.4	ND
11-1	1200.	1.34	178.	0.41	587.	2.91	38.2	ND
PHEASANT								
White Bluffs								
10-4	3500.	1.79	197.	ND	1990.	1.96	50.6	ND
11-29	41.1	2.01	77.3	0.39	35.8	3.17	13.4	0.14
12-22	19.8	1.69	42.8	0.32	1.89	3.06	5.50	0.03
U Swamp								
11-10	62.8	0.88	1.48	123.	1.81	2.79	0.26	110.
Hanford								
11-13	465.	3.93	195.	0.19	124.	2.56	214.	0.08
11-22	16.1	2.90	31.9	0.25	10.8	2.99	6.42	0.08

APPENDIX C
TABLE 8 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN UPLAND GAME BIRD SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Species Date	Head				Muscle			
	^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba	^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba
Analytical Limit	1	1	0.2	0.1	1	1	0.2	0.1
PHEASANT (Cont.)								
Hanford (Cont.)								
12-19	1.39	2.51	28.0	0.16	<1.0	3.30	3.66	ND
12-20	<1.0	ND	17.6	ND	1.64	2.60	3.22	0.06
100-K								
12-19	<1.0	2.95	38.5	0.05	<1.0	2.92	5.88	0.04
12-22	<1.0	2.53	51.6	0.27	2.44	2.36	9.0	0.09
12-22	<1.0	ND	28.4	0.56	1.71	2.48	5.96	0.01
12-22	3.09	1.57	40.7	0.15	<1.0	2.04	4.94	0.02
Ringold								
10-17	<1.0	2.20	0.20	0.25	<1.0	2.99	0.07	0.10
Franklin Co.								
12-10	<4.04	1.69	0.10	ND	<1.56	2.61	ND	ND
Adams Co.								
12-12	<3.70	1.81	ND	ND	<1.0	2.26	ND	ND
Columbia Camp								
12-13	<1.0	1.58	1.86	0.23	<1.0	2.31	0.08	ND
QUAIL								
White Bluffs								
11-30	58.0	ND	65.8	1.01	25.8	2.49	5.68	0
11-30	6.29	7.08	34.2	0	13.9	4.33	5.32	0.14
11-30	74.5	ND	131.	0	21.6	2.20	12.0	0
11-30	6.01	1.0	33.8	0	6.70	3.66	2.53	0

APPENDIX C
TABLE 8 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN UPLAND GAME BIRD SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Species Date	Head				Muscle			
	^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba	^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba
Analytical Limit	1	1	0.2	0.1	1	1	0.2	0.1
QUAIL (Cont.)								
White Bluffs (Cont.)								
11-30	9.68	ND	34.4	0	9.10	1.82	4.61	0.30
12-11	28.5	4.11	55.4	0.07	4.05	4.04	3.38	0.08
12-11	20.2	ND	85.9	0.08	70.5	ND	5.51	ND
12-19	<1.0	4.65	25.0	0.50	<1.0	1.67	1.92	ND
12-19	5.21	2.66	30.1	ND	3.9	2.43	3.63	0.10
12-20	<1.0	ND	17.4	ND	<1.0	1.97	1.16	ND
12-22	10.9	1.50	50.3	ND	4.55	1.16	2.55	0.01
12-22	<1.0	ND	28.5	ND	<1.0	2.52	2.31	ND
12-29	27.5	4.22	105.	0.15	5.54	3.25	8.02	0.47
12-29	11.5	ND	58.8	ND	2.27	0.61	2.69	ND
12-29	2.38	ND	25.7	ND	<1.0	4.39	1.84	0.28
12-29	2.89	2.52	26.6	0.26	<1.0	1.45	2.27	0.16
12-29	21.2	ND	101.	ND	2.92	3.76	5.42	0.19
12-29	3.18	2.21	22.	ND	4.14	3.06	2.74	0.17
12-29	16.8	0.50	74.	ND	4.13	1.61	4.30	ND
12-29	14.4	1.04	38.	ND	1.24	3.96	1.77	0.10
Hanford								
11-3	142.8	3.23	76.8	0.70	140.	5.48	10.2	0.43
11-3	20.8	4.18	33.8	0.77	23.7	3.45	5.89	0.04
11-22	45.2	3.38	56.4	0.59	19.1	5.38	5.10	0.26
11-27	6.94	9.44	32.5	0.96	5.6	7.33	2.69	0.33
11-27	32.5	3.98	89.5	0.51	20.6	4.54	6.41	0.02
11-27	12.1	16.2	49.5	0.45	10.8	3.78	5.36	0.36
11-27	31.0	14.7	84.9	0.64	92.3	6.64	14.2	0.47
11-30	3.9	ND	51.3	0	12.9	4.65	5.82	0
11-30	0.73	2.89	43.9	0	7.54	5.16	4.41	0
11-30	65.5	4.15	87.0	0.34	22.5	3.53	5.35	0.18

APPENDIX C
TABLE 8 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN UPLAND GAME BIRD SAMPLES IN THE HANFORD ENVIRONS - 1967

Units of pCi/g

Species	Date	Head				Muscle			
		^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba	^{32}P	^{40}K	^{65}Zn	^{137}Cs-^{137m}Ba
	Analytical Limit	1	1	0.2	0.1	1	1	0.2	0.1
QUAIL (Cont.)									
Hanford (Cont.)									
	11-30	11.3	ND	37.8	0	5.45	3.42	2.60	0.03
	11-30	71.5	ND	103.	0.36	14.8	2.16	8.34	0
	11-30	6.05	6.26	21.8	0.20	3.28	2.64	1.57	0
	12-4	14.5	ND	28.2	ND	3.83	1.12	2.80	ND
	12-4	4.99	ND	43.7	ND	8.79	2.52	4.41	0.09
	12-4	2.85	ND	34.9	0.15	80.2	4.74	4.18	0.09
	12-4	<1.0	ND	29.4	ND	6.08	2.37	2.13	ND
	12-4	57.4	5.63	89.2	ND	12.9	1.13	5.23	0.11
	12-12	9.44	2.04	53.8	0.32	2.27	3.20	1.82	0.03
	12-14	5.15	1.56	27.7	0.16	1.82	2.17	1.76	0.20
	12-14	7.29	4.55	45.6	ND	4.12	3.02	3.04	0.24
	12-14	6.04	8.12	40.8	ND	2.62	3.07	2.88	0.31
	12-14	<1.0	ND	8.0	0.06	1.29	2.85	0.40	0.13
	12-14	<1.0	1.63	6.71	0.07	<1.0	4.10	0.47	0.15
	12-14	52.2	ND	114.	ND	12.5	4.24	6.80	0.13
	12-19	5.17	2.55	13.4	ND	1.55	4.71	1.06	ND
	12-19	14.1	ND	93.6	ND	3.88	4.76	4.26	0.22
	12-19	12.9	2.14	95.	0.17	4.50	2.81	5.02	ND
	12-19	< 1.0	ND	28.6	ND	1.06	1.57	1.78	0.17
	12-19	< 1.0	1.20	33.5	0.09	2.72	1.80	2.53	0.09
	12-19	23.8	6.92	12.6	0.04	4.90	2.91	5.21	0.13
	12-20	< 1.0	1.03	44.8	ND	<1.0	ND	1.76	ND
	12-20	< 1.57	4.90	39.2	ND	3.88	0.66	2.88	0.04
	12-20	< 1.0	ND	9.3	ND	<1.0	1.19	0.56	0.05
	12-22	10.9	1.5	50.3	ND	4.55	1.16	2.55	0.01
	12-22	< 1.0	ND	28.5	ND	<1.0	2.52	2.31	ND
Burbank									
	10-17	2.37	4.18	5.09	0	1.0	3.08	0.65	0.31

APPENDIX D

RADIONUCLIDES IN SHELLFISH

APPENDIX D
TABLE 1

CONCENTRATIONS OF RADIONUCLIDES IN
OYSTERS FROM WILLAPA BAY, WASHINGTON - 1967

pCi/g

Date	^{32}P	^{40}K	^{65}Zn	^{137}Cs
Analytical Limit	1.0	1.0	0.2	0.1
1-12	-	2	20	-
1-25	-	2	25	0.1
2-6	2	2	23	-
2-21	LOST	2	21	-
3-8	5	2	18	-
3-22	4	2	20	-
4-12	4	2	26	-
4-25	8	2	34	-
5-9	10	2	44	-
5-24	3	3	43	-
6-2	7	2	43	-
6-19	5	1	25	-
7-2	10	2	30	-
7-20	9	2	35	0.1
8-1	2	2	31	-
8-16	-	2	32	-
8-30	-	2	32	-
9-13	-	2	30	-
9-25	-	2	30	-
10-9	-	2	26	-
10-23	-	1	27	-
11-21	1	2	34	-
11-29	-	2	35	-
12-12	1	5	87	0.1
12-22	-	2	34	-
	3.4	2.1	32	0.1

Results less than analytical limit are indicated by (-)

APPENDIX E

RADIONUCLIDES IN THE ATMOSPHERE

APPENDIX E
TABLE 1

CONCENTRATIONS OF ^{131}I IN AIR OF HANFORD ENVIRONS - 1967
picocuries/cubic meter

Week Ending Date	Project (200 W)	Tri-Cities*	Mesa	Benton City	Byers Landing	Midway	Wahluke	Eltopia	McNary Dam	Ringold
1-3	0.02	-	0.03	-	-	0.03	0.02	0.03	-	
1-10	-	-	-	-	-	0.08	-	-	-	
1-17	0.15	-	0.05	-	-	0.02	0.05	0.12	-	
1-24	0.21	0.03	0.03	0.19	-	0.09	-	0.16	-	-
1-31	0.58	0.02	-	-	0.03	0.02	0.03	0.04	-	-
2-7	0.16	0.02	0.02	-	-	0.03	-	-	0.06	-
2-14	0.42	-	-	0.02	0.02	-	-	-	-	-
2-21	0.04	-	-	-	-	-	-	-	0.03	-
2-28	0.03	-	-	0.02	0.03	0.04	0.02	-	0.04	-
3-7	0.02	-	-	0.04	0.06	-	-	-	-	-
3-14	-	-	-	0.03	0.02	-	-	-	0.03	-
3-21	0.03	0.02	0.02	0.02	-	-	-	0.08	0.06	N.S.
3-28	0.08	-	-	0.03	-	0.03	-	N.S.	-	-
4-4	0.44	-	-	0.04	0.04	0.07	0.15	N.S.	0.02	-
4-11	0.08	0.06	-	0.02	0.06	0.24	N.S.	N.S.	-	0.10
4-18	-	0.02	-	-	-	0.03	N.S.	0.72	0.03	-
4-25	-	-	0.02	-.02	-	-	0.02	0.39	-	-
5-2	0.02	-	-	-	0.03	-	-	-	-	-
5-9	0.15	-	-	-	-	-	0.02	-	0.02	-
5-16	0.17	-	-	-	0.03	-	-	0.04	-	-
5-23	0.06	-	-	-	0.05	-	-	0.02	-	-
5-30	0.38	-	-	0.03	0.04	0.05	0.02	0.09	-	-

Results less than analytical limit of $0.02 pCi/m^3$ are indicated by a (-).
No entry indicates no analysis made.
N.S. indicates no sample
* Richland, Kennewick, Pasco, Washington

APPENDIX E
TABLE 1 (Continued)

CONCENTRATIONS OF ^{131}I IN AIR OF HANFORD ENVIRONS - 1967
picocuries/cubic meter

Week Ending Date	Project (200 W)	Tri-Cities*	Mesa	Benton City	Byers Landing	Midway	Wahluke	Eltopia	McNary Dam	Ringold
6-7	0.03	0.06	-	0.03	0.03	0.02	0.04	0.03	0.03	0.03
6-14	0.06	0.02	0.03	-	-	-	0.04	-	-	-
6-21	-	0.03	-	-	-	-	-	0.04	-	-
6-28	0.11	0.03	0.04	-	0.02	-	0.02	0.03	-	-
7-5	0.05	0.04	-	0.04	-	0.04	0.03	0.04	0.04	-
7-12	-	0.06	-	-	0.03	0.03	-	-	0.03	-
7-19	0.04	-	0.03	-	-	-	-	-	0.04	-
7-26	0.03	0.03	0.03	-	0.02	-	0.03	-	-	0.03
8-2	0.06	0.03	0.04	0.08	-	-	-	0.13	-	-
8-9	0.03	-	-	-	-	0.03	-	0.04	-	0.03
8-16	0.09	0.05	-	-	0.03	0.02	0.02	-	0.03	-
8-23	0.03	-	-	-	0.02	-	-	-	-	-
8-30	-	0.04	0.15	-	-	-	0.19	-		0.17
9-5	-	-	-	-	-	-	-	-	-	0.03
9-12	0.08	-	-	-	-	0.03	-	-	0.02	-
9-19	0.05	-	-	-	-	-	0.03	-	0.03	-
9-26	0.13	0.02	-	-	-	-	-	-	-	-
10-3	0.06	-	-	0.12	-	0.16	0.17		-	0.02
10-10	-	-	0.03	-	0.03	-	0.02	-	-	0.03
10-17	-	-	-	-	0.03	-	0.02	-	-	-
10-24	0.09	0.04	-	-	0.09	0.02	-	-	0.08	0.04
10-31	0.03	-	-	0.04	0.06	0.03	-	0.15	-	-
11-7	0.02	-	-	-	-	0.04	0.02	-	0.03	0.03
11-14	0.04	0.02	-	0.02	-	-	-	-	0.02	-
11-21	0.07	-	0.04	-	-	0.03	-	0.04	-	-
11-28	0.02	-	-	-	-	0.03	-		-	-
12-5	0.08	-	-	-	0.03	-	-	-	0.04	-
12-12	0.06	0.02	0.03	-	0.03	-	-	-	0.04	0.02
12-19	0.03	-	-	-	-	-	-	0.03	-	-
12-26	-	-	-	-	-	-	0.02	0.09	0.02	-

Results less than analytical limit of 0.02pCi/m^3 are indicated by a (-).
No entry indicates no analysis made.
* Richland, Kennewick, Pasco, Washington.

APPENDIX E
TABLE 2

CONCENTRATION OF RADIOACTIVE PARTICULATES
IN THE AIR OF THE PACIFIC NORTHWEST - 1967
picocuries/cubic meter

Week Ending Date	Project (200 W)	Tri-Cities*	Perimeter Communities									
			Ellensburg, Washington	McNary Dam, Oregon	Moses Lake, Washington	Pendleton, Oregon	Spokane, Washington	Sunnyside, Washington	Walla Walla, Washington	Washtucna, Washington	Wenatchee, Washington	Yakima, Washington
1-3	3.4	3.8		0.06	2.4	0.06	3.5		0.07		0.06	0.07
1-10	0.43	0.43	0.64	2.16	0.51	4.4	0.13		1.8		0.32	1.9
1-17	0.63	0.69	0.22	0.32	0.54	0.43	0.44	0.40	1.0	0.17	0.10	0.30
1-24	2.0	0.18		0.58	0.25	0.41	0.23		0.38	0.18	0.26	0.18
1-31	2.5	0.19	0.23	0.14	0.18	0.15		0.11	0.27	0.16	0.12	0.17
2-7	0.71	0.19	0.15	0.13	0.29	0.11	0.19	0.24	0.16		0.16	0.10
2-14	0.93	0.24	0.14	0.21		0.18	0.15	0.15	0.30	0.12	0.13	0.23
2-21	0.26	0.09	0.16	0.12	0.41	0.13		0.32	0.16		0.10	0.09
2-28	0.67	0.27	0.28	0.23		0.27	0.44		0.34		0.22	0.33
3-7	0.44	0.24	0.02	0.20	0.41	0.22	0.24		0.29		0.11	0.20
3-14	0.35	0.33	0.28	0.18	0.29	0.43		0.37	0.21	0.18	0.14	0.23
3-21	0.32	0.16	0.21	0.31	0.36	0.21	0.32	0.22	0.16		0.14	0.20
3-28	0.36	0.07	0.10	0.18	0.26	0.13	0.13	0.15	0.17		0.15	0.15
4-4	0.37	0.17	0.12	0.10	0.47	0.18	0.36	0.15	0.10	0.15	0.11	0.12
4-11	0.37	0.12	0.14	0.09	0.28	0.14		0.11	0.14		0.15	0.16
4-18	0.20	0.13	0.14	0.11	0.16	0.07	0.13	0.13	0.09	0.11	0.09	0.15
4-25	0.30	0.10	0.09	0.09	0.18	0.10	0.10	0.12	0.07	0.16		0.06
5-2	0.23	0.10	0.10	0.11	0.17	0.10	0.10	0.06	0.07		0.14	0.08
5-9	0.25	0.12	0.11	0.13	0.19	0.16	0.12	0.10	0.10		0.12	0.15
5-16	0.15	0.10	0.08	0.12	0.16	0.15	0.10	0.10	0.08		0.14	0.16
5-23	0.14	0.09	0.07	0.09	0.17	0.13	0.13	0.09	0.11		0.11	0.11
5-30	0.16	0.07	0.08	0.12	0.03	0.07	0.06	0.07	0.14		0.15	0.14
6-7	0.12	0.06	0.08	0.10	0.13	0.09	0.07		0.08	0.07	0.12	0.04
6-14	0.13	0.11	0.07	0.07	0.12	0.06	0.13	0.11			0.09	0.08
6-21	0.44	0.08	0.07	0.07	0.14	0.10	0.13	0.11	0.15		0.08	0.09
6-28	0.19	0.05	0.05	0.04	0.14	0.06	0.14	0.06	0.03			0.05
7-5	0.22	0.07	0.06	0.07	0.09	0.09	0.10	0.07	0.08		0.06	0.04
7-12	0.08	0.06	0.06	0.07	0.06	0.05	0.15	0.07	0.04		0.06	0.04
7-19	0.14	0.15	0.06	0.11	0.10	0.05	0.08	0.07	0.06	0.06	0.04	0.04
7-26	0.06	0.06	0.06	0.04	0.18	0.06	0.05	0.06	0.05		0.02	0.03
8-2	0.10	0.04		0.07	0.16	0.07	0.08	0.13	0.05		0.03	0.12
8-9	0.10	0.09	0.04	0.07	0.08	0.04	0.05		0.04			0.07
8-16	0.13	0.05		0.06	0.10	0.06	0.08	0.05	0.07			0.02
8-23	0.17	0.05	0.05	0.02	0.07	0.04	0.08	0.07	0.04	0.04		0.04
8-30	0.26	0.03	0.14			0.07	0.33	0.08				0.05
9-5	0.13	0.06	0.06	0.07	0.13	0.06	0.10	0.05	0.08		0.11	0.06
9-12	0.07	0.03		0.02	0.18	0.04	0.05	0.03	0.08		0.02	0.07
9-19	0.12	0.04		0.04	0.06	0.07	0.13	0.04	0.03		0.04	0.02
9-26	0.14	0.06	0.02	0.03	0.06	0.03	0.04		0.05	0.05	0.02	0.06
10-3	0.11	0.05	0.05	0.03	0.08	0.06	0.11	0.03	0.05	0.47	0.07	0.05
10-10	0.12	0.07	0.05	0.10	0.02	0.04	0.09	0.11	0.04	0.06	0.03	0.03
10-17	0.12	0.05	0.05	0.21	0.15	0.09	0.07	0.07	0.04	0.04	0.02	0.03
10-24	0.21	0.07	0.03	0.06	0.30	0.04	0.46	0.05	0.06	0.08	0.04	0.12
10-31	0.26	0.09	0.83	0.04	0.64	0.22	0.13	0.08	0.11	0.16	0.38	0.53
11-7	0.21	0.07	0.05	0.08	0.07	0.03	0.11	0.05	0.03	0.28	0.04	0.02
11-14	0.22	0.14	0.07	0.08	0.13	0.21	0.09	0.07	0.07	0.12	0.08	0.05
11-21	0.39	0.12	0.11	0.04	0.13	0.06	0.04	0.03	0.07	0.05	0.04	0.04
11-28	0.15	0.14	0.02	0.11	0.10	0.02		0.08	0.05		0.03	0.03
12-5	0.24	0.08	0.03	0.10	0.08	0.26	0.13	0.05	0.03	0.04	0.08	0.04
12-12	0.30	0.03	0.06	0.04	0.09	0.04	0.19	0.04	0.05	0.05		0.03
12-19	0.64	0.16	0.06	0.32	0.17	0.03		0.02	0.05	0.14		0.02
12-26	0.64	0.13	0.07	0.07	0.07	0.05	0.11	0.06	0.07			0.08

No entry indicates no analysis

APPENDIX F

RADIONUCLIDES IN FARM PRODUCE AND COMMERCIAL FOODSTUFFS

APPENDIX F
TABLE 1

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Riverview Irrigation District						
1-3	-	1400	130		12	-
1-10	-	1200	-		-	-
1-17	-	1500	140		-	-
1-24	-	1400	190		3	-
1-31	-	1200	-		-	-
2-7	-	1100	140		-	-
3-13	-	1200	-		-	<51
3-20	-	1300	-		-	<51
3-27	-	1300	-		-	<51
4-3	-	1200	-		-	<51
4-10	-	1500	-		-	<51
4-17	33	1400	-	<2.0	-	-
4-24	120	1300	-		-	-
5-1		1400	110		-	-
5-8	76	1400	-		-	-
5-15	920	1100	330		-	-
5-22	1800	1400	470		-	-
5-29	810	1400	480		-	-
6-5		1500	580		-	-
6-12	28.6	1400	560		-	-
6-19	25.8	1300	480		-	-
6-26	780	1400	440		-	-
7-3	740	900	370		-	-
7-10	680	1300	390	4.3	-	-
7-17	600	1400	440		-	-
7-24	560	1300	500		-	-
7-31	680	1300	420		-	-
8-7	240	1400	450		-	-
8-14	510	1400	430		-	-
8-21	610	1400	440		3	-
8-28	1000	1200	500		-	-
9-5	1300	1200	450		-	-
9-12	1100	1200	440		-	-
9-19	800	1200	360		-	-
9-26	1300	1300	320		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Riverview Irrigation District						
10-4	2000	1200	380		-	-
10-10	890	1200	270	1.0	-	-
10-16	890	1400	270		-	-
10-24	710	1200	260		-	-
10-30	870	1400	250		-	-
11-6	360	1200	190		-	-
11-13	120	1400	170		-	-
11-20	98	1300	110		-	-
11-27	55	1400	130		-	-
12-4	52	1300	110		-	-
12-11	33	1100	-		-	-
12-18	20	1400	-		-	-
12-27	-	1400	140		-	-
Ringold Farm						
1-3	22	1100	-		83	-
1-6					27	
1-10	48	1100	-		-	-
1-17	-	860	-		31	-
1-24	28	1300	-		10	-
1-31	-	1400	-			-
2-7	24	1200	-		6	-
2-14	32	1100	-		4	-
2-21	22	1500	-		3	-
2-28	30	1000	-		-	-
3-7	30	1000	-		-	<51
3-14	24	1100	-		-	51
3-21	60	1100	120		-	<51
3-28	48	1200	-		-	<51
4-4	60	1000	-		-	<51
4-11	88	1300	130		3	<51
4-18	55	1200	130		-	-
4-25	33	1100	100	-	-	-
5-2	59	1200	-		-	-
5-9	62	930	-	-	-	-
5-16	140	1000	110		5	-

Results less than analytical limit are indicated by (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Ringold Farm						
5-23	150	1300	170		3	-
5-31	210	1100	-		4	-
6-6	140	1200	-		-	-
Pasco Farm No. 1						
1-3	-	810	-		-	-
1-6		1000	-		61	-
1-10	-				26	-
1-17	-	1000	-		10	-
1-24	-	1200	-		7	-
1-31	-	820	-		-	-
2-7	26	930	-		-	-
2-14	-	950	-		-	-
2-21	-	1300	-		-	-
2-28	-	980	-		-	-
3-7	-	890	-		-	<51
3-14	21	1100	-	7	-	<51
3-21	-	1200	-	3.5	-	<51
3-28	-	1200	-		-	<51
4-4	-	1000	-		-	<51
4-11	-	980	-		-	<51
4-18	25	1400	-		-	-
4-25	-	1100	-		-	-
5-2	-	1300	-		-	-
5-9	25	1200	-		-	-
5-16	51	1200	-		-	-
5-23	90	1400	-		-	-
5-31	35	1100	-		-	-
6-6	35	1200	-		-	-
6-13	-	1200	-	3.9	-	-
6-20	-	1000	-		-	-
6-27	-	1100	-		-	-
7-5	-	1200	-		-	-
7-11	-	1300	-		-	-
7-18	44	1200	-		-	-
7-25	-	1300	-		-	-
8-1	-	1400	-		-	-
8-8	-	1400	-		-	-

Results less than analytical limit are indicated by (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Pasco Farm No. 2						
1-3					5	
1-10					28	
1-17					-	
1-24					-	
1-31					-	
2-7					-	
2-14					-	
2-21					-	
2-28					-	
3-7					-	
3-14					-	
3-21					-	
3-28					-	
4-4					-	
4-11					-	
4-18					-	
4-25					-	
5-2					-	
5-9					-	
5-16					5	
5-23					5	
5-31					5	
6-6					-	
6-20					-	
6-27					-	
7-6					-	
7-11					-	
7-18					-	
7-25					-	
8-1					-	
8-8					-	
8-15					-	
8-22					-	
8-29					3	
9-5					5	
9-12					-	

Results less than analytical limit are indicated by (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Pasco Farm No. 2						
9-19					-	
9-26					-	
10-3					4	
10-10					-	
10-17					-	
10-26					-	
10-31					-	
11-7					-	
11-14					-	
11-21					-	
11-28					-	
12-5					-	
12-12					-	
12-19					-	
12-27					-	
Pasco Farm No. 3						
8-15	28	1400	-		-	-
8-22	21	1200	120		-	-
8-29	24	1400	-		4	-
9-5	-	1400	-		-	-
9-12	-	1200	-	3.6	4	-
9-19	-	1400	-		-	-
9-26	-	1400	-		-	-
10-3	-	1500	-		-	-
10-10	220	1300	-		-	-
10-17	42	1300	-		-	-
10-24	180	1200	-		-	-
10-31	37	1000	-		-	-
11-7	380	1500	-		-	-
11-14	41	1200	-		-	-
11-21	71	1200	-		4	-
11-28	180	1400	-		-	-
12-5	81	1300	-		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Eltopia Farm No. 1						
1-3					34	
1-6					44	
1-10					17	
1-17					11	
1-24					4	
1-31					4	
2-7					-	
2-14					-	
2-21					-	
2-28					-	
3-7					-	
3-14					-	
3-21					-	
3-28					-	
4-5					-	
4-11					-	
4-18					-	
4-25					-	
5-2					-	
5-9					-	
5-16					5	
5-23					4	
6-6					-	
6-13					-	
6-20					-	
6-27					-	
7-6					-	
7-11					-	
7-18					-	
7-25					-	
8-1					-	
8-8					-	
8-15					-	
8-22					4	
8-29					4	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Eltopia Farm No. 1						
9-5					-	
9-12					3	
9-19					-	
9-26					-	
10-4					3	
10-10					-	
10-17					-	
10-24					-	
10-31					-	
11-7					-	
11-14					-	
11-21					-	
11-28					-	
12-5					-	
12-12					-	
12-19					-	
12-27					-	
Eltopia Farm No. 2						
12-5					-	
12-12					-	
12-19					-	
12-27					-	
West Richland Farm No. 1						
5-11		1400	-		4	-
5-18		1300	-		5	-
5-25		1300	-		-	-
6-1		1300	-		-	-
6-8		1400	-		-	35
6-15		1600	-		-	-
6-22		1200	-		-	-
6-29		1300	-		-	-
7-6		1300	-		-	-
7-13		1400	-		-	-
7-20		1500	-		4	-
7-27		1400	-		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
West Richland Farm No. 1						
8-3		1500	-		-	35
8-10		1700	-		-	48
8-17		1400	-		-	-
8-24		1600	-		-	-
8-31		1500	-		-	-
9-7		1300	-		-	-
9-14		1400	-		3	32
9-21		1400	-		-	-
9-28		1300	-		-	-
10-5		1200	-		3	-
10-12		1300	-		-	-
10-19		1200	-		-	-
10-26		1400	-		-	-
11-2		1200	-		-	-
11-9		1300	-		-	-
11-16		1300	-		-	-
11-22		1100	-		-	-
11-30		1300	-		-	-
12-7		1200	-		-	-
12-14		1300	-		-	-
12-21		1300	-		-	-
12-28		1300	-		5	-
West Richland Farm No. 2						
1-5		1400	-		7	-
1-12		1400	-		-	-
1-19		1400	-		-	-
1-26		1400	-		3	-
1-31		1400	-		-	-
2-2		1200	-		-	-
2-9		1200	-		-	-
2-16		1300	-		-	-
2-23		1300			-	
3-2			-		-	
3-9		1500	-		-	<51
3-16		1500	-		-	<51
3-23		1400				<51

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
West Richland Farm No. 2						
3-30		1400	-		-	<51
4-6		1200	-		-	<51
4-13		1400	-		-	<51
4-20		1400	-		-	-
4-27		1400	-		-	-
5-4		1600	-		-	-
5-11		1400	-		-	-
Benton City Farm						
1-5					40	
1-12					12	
1-19					10	
1-26					6	
2-2					3	
2-9					-	
2-16					-	
2-23					-	
3-2					-	
3-9					-	
3-16				-	-	
3-23					-	
3-30					-	
4-6					-	
4-13					-	
4-20					-	
4-27					-	
5-4					-	
5-11					-	
5-18					-	
5-25					-	
6-1					-	
6-8				<2.0	-	
6-15					-	
6-22					-	
6-29					-	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Benton City Farm						
7-6					-	
7-13					-	
7-20					-	
7-27					-	
8-3					-	
8-10					-	
8-17					-	
8-24					-	
8-31					-	
9-7				-	-	
9-14					-	
9-21					-	
9-28					-	
10-5					-	
10-12					-	
10-19					-	
10-26					-	
11-2					4	
11-9					-	
11-16					-	
11-22					-	
11-30					-	
12-7				2.8	-	
12-14					-	
12-21					-	
12-28					-	
Mesa Farm						
4-26					-	
5-3					-	
5-10					-	
5-17					7	
5-24					-	
5-31					4	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Mesa Farm						
6-7					-	
6-14					-	
6-21					-	
6-28					-	
7-5					-	
7-12					-	
7-19					-	
7-26					-	
8-2					-	
8-9					-	
8-16					-	
8-23					-	
8-30					5	
9-6					4	
9-13					3	
9-20					5	
9-27					-	
10-4					-	
10-11					-	
10-18					-	
10-25					-	
11-1					-	
11-8					-	
11-15					-	
11-21					-	
12-6					-	
12-13					-	
12-20					-	
12-27					-	
Milk Shed Samples						
Columbia Basin						
1-12		1300	130	-	-	-
1-26		1400	-		-	-
2-9		1400	110		-	-
2-23		1300	120		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Columbia Basin (Continued)						
6-15		1200	-		-	-
6-29		1100	-		-	<51
7-13		1200	-	-	-	-
7-27		1200	-		-	<51
8-10		1200	-		-	-
8-31		1500	110		3	-
9-18		1300	-		-	-
9-28		1300	-		-	-
10-16		1200	-	7.0	-	-
10-26		1500	-		-	-
11-16		1300	-		-	-
12-4		1200	-		-	-
12-14		1300	-		-	-
12-28		1400	-		4	-
Benton City - Prosser						
1-12		1100	-		-	-
1-26		1200	-		-	-
2-10		1600	-		-	-
2-23		1300	-		-	-
3-9		1200	-		-	<51
3-27		1200	-	4.6	-	<51
4-4			-		-	
4-13		1300	-		-	<51
4-27		1300	-		-	-
5-12		1000	-		-	-
5-25		1200	-		-	-
6-15		1300	-	6.0	-	-
6-29		1100	-		-	-
7-13		1100	-		-	-
7-27		1200	-		-	51
8-10		1300	-		-	-
8-31		1600	-		4	-
9-18		1300	-		-	-
9-28		1300	-		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Benton City - Prosser (Continued)						
10-16		1200	-		-	-
10-26		1400	-		-	-
11-16		1300	-		-	-
12-4		1200	-		-	-
12-14	-	1600	-	4.0	-	-
12-28		1200	-		-	-
Local Purchase - Commercial Milk						
Brand A						
1-5					4	
1-19		1300	-		-	
2-2		1100	-		-	
2-16		1300	-	5.8	-	
3-2		1200	-		-	
3-16		1300	-		-	
4-6		1100	-		-	
4-20		1200	-		-	
5-4		1100	-		-	
5-18		1300	-	3.4	-	
6-1		1300	-		-	
6-15		1400	-		-	
7-6					-	
7-20		1300	-		-	
8-3		1100	-		-	
8-17		1300	-	3.2	-	
9-7		1400	-		-	
9-21		1300	-		-	
10-5		1100	-		-	
10-19		1400	-		-	
11-2		1100	-		-	
11-16		1200	-	2.3	-	
12-7		1300	-		-	
Brand F						
1-5					-	
1-19					5	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Brand F (Continued)						
2-2		1200	-		-	-
2-16		1200	-		-	92
3-2		1200	-		-	<51
3-16		1200	-	3.4	-	<51
4-6		1200	-		-	<51
4-20	20	1400	-		-	-
5-4		1200	-		-	-
5-18		1300	-		-	-
6-1		1500	-		-	-
6-15		1200	-	4.6	-	-
7-6		1200	-		-	-
7-20		1200	-		-	-
8-3		1300	-		-	-
8-17		1400	-		-	-
9-7		1400	-		-	-
9-21		1200	-	-	-	-
10-5		1200	-		-	-
10-19		1200	-		-	-
11-2		1200	-		-	-
11-16		1300	-		-	-
12-7		1200	-	2.8	-	-
Brand H						
1-5	-	1100	-	6.6	5	-
1-19	-	1200	-	6.0	-	33
2-2	-	1300	-		-	-
2-16	-	1500	-		-	41
3-2	-	1100	-		-	<51
3-16	-	1400	-		-	<51
4-6	-	1300	-		-	<51
4-20	20	1200	-	-	-	-
5-4	-	1100	-		-	-
5-18	27	1300	-		-	34
6-1	25	1400	-		-	32
6-15	-	1400	-		-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 1 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN MILK - 1967
picocuries/liter

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit	20	400	100	2	3	30
Brand H (Continued)						
7-6		1200	-		-	
7-20	24	1100	-	10	-	
8-3	-	1400	-		-	35
8-17	-	1400	-		-	-
9-7	-	1200	-		-	-
9-21	-	1200	-		-	-
10-5	-	1300	-		-	-
10-19	-	1300	-	7.5	-	-
11-2	-	1400	-		-	-
11-16	-	1300	-		-	-
12-7	-	1200	-	2.8	-	-

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Riverview Irrigation District									
1- 3	-	25	-		2.20	5.8	4.1	0.08	11
1-10	-	24	0.36		0.07	-	-	0.10	-
1-17	-	24	0.22		0.03	0.2	-	0.09	-
1-24	-	26	0.61		0.06	-	-	0.10	-
1-31	-	28	0.29		-	-	0.17	0.04	-
2- 7	-	27	0.22		0.06	-	-	0.07	-
3-13	-	26	0.64		0.65	2.0	< 2.1	< 0.20	-
3-20	-	30	< 0.37		< 0.21	< 1.7	-	< 0.19	-
3-27	-	33	< 0.40		< 0.22	< 1.8	-	< 0.21	-
4- 3	-	24	< 0.34		< 0.18	< 1.6	-	< 0.18	-
4-10	-	26	< 0.35		< 0.20	< 1.6	< 0.39	0.18	< 1.9
4-17	-	24	< 0.28		< 0.15	< 1.3	-	< 0.15	< 1.5
4-24	-	30	< 0.43		< 0.24	< 2.0	-	< 0.23	< 1.5
5- 1	-	30	< 0.35		< 0.19	< 1.6	-	< 0.19	< 1.9
5- 8	-	27	< 0.38		< 0.21	< 1.7	-	< 0.20	< 2.1
5-15	-	18	< 0.44		< 0.24	< 2.0	-	< 0.23	-
5-22	3.7	5.9	0.60		0.09	< 0.73		< 0.08	-
5-29	1.2	6.0	1		0.13	< 0.80		< 0.09	-
6- 5	2.6	6.1	0.35		< 0.15	< 1.1		< 0.13	< 1.3
6-12	8.2	6.0	0.65		0.14	1.01		< 0.11	< 1.1
6-19	1.5	6.9	2		0.32	< 1.3		< 0.15	< 1.6
6-26	-	6.0	1.4		< 0.17	< 1.3		< 0.15	< 1.6
7- 3	-	7.5	1.1		0.14	< 1.1		< 0.12	< 1.3
7-10	-	10	< 0.30		< 0.17	< 1.4		< 0.16	< 1.6
7-17	-	10	< 0.32		< 0.18	< 1.4		< 0.16	< 1.7
7-24	-	11			< 0.13	< 1		< 0.12	
7-31	-	5.4	1.7		< 0.12	< 0.9		< 0.10	< 2.4
8- 7	1.9	4.6	3.8		< 0.05	< 0.42		< 0.05	-
8-14	1.1	4.7	2.5			< 0.45		< 0.05	-
8-21	5.8	5.4	1.9		< 0.07	< 0.56		< 0.06	-
8-28	1.4	12	0.56		< 0.10	< 0.81		< 0.09	-
9- 5	-	25	< 0.31		< 0.17	< 1.4		< 0.16	< 1.7
9-12	-	5.4	0.28		0.97	< 0.51		< 0.06	-

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Riverview Irrigation District (continued)									
9-19	-	25	0.29		< 0.16	< 1.3		< 0.31	< 1.6
9-26	1.3	20	< 0.30		< 0.17	< 1.4		< 0.16	< 1.6
10- 4	13	22	0.27		< 0.14	< 1.2		< 0.14	< 1.4
10-10	1.9	24	< 0.30		< 0.17	< 1.4	< 0.25	< 0.16	< 1.6
10-16	4.2	28	< 0.37		< 0.20	< 1.7		< 0.19	< 2.0
10-24	-	23	< 0.27		< 0.15	< 1.2		< 0.14	< 3.3
10-30	-	26	< 0.30		2.06	< 1.4		< 0.15	< 3.6
11- 6	-	23	< 0.27		0.93	< 1.2	< 0.25	< 0.14	< 3.3
11-13	-	24	< 0.26		1.13	< 1.2		< 0.14	< 3.2
11-20	-	23	< 0.29		< 0.17	< 1.3		< 0.15	< 3.5
11-27	-	23	< 0.30		< 0.17	< 1.4		< 0.16	< 3.6
12- 4	-	14	< 0.20		< 0.11	< 0.91		< 0.10	< 2.4
12-11	-	24	< 0.29		< 0.17	< 1.3		< 0.15	< 3.6
12-18	-	24	< 0.29		0.37	< 1.3	< 0.55	< 0.15	< 1.6
12-27	Lost	23	< 0.26		0.24	< 1.2	< 0.24	< 0.14	< 1.4
Ringold Farm									
1- 3	-	25	0.73		0.30	-	-	0.13	-
1-10	-	21	-		-	0.92	-	0.12	-
1-17	-	21	-		0.05	-	-	0.12	-
1-24	-	22	0.13		0.05	-	-	0.14	
1-31	-	21				-	-	0.16	
2- 7	-	23	-		-	0.09	-		
2-14	-	20	-		-	-	-	0.12	-
2-21	-	32	-		-	1.6	-	-	-
2-28	-	23	1.6		0.19	-		0.16	-
3- 7	-	25	1.0		< 0.19	< 1.6	< 0.34	< 0.18	< 1.9
3-14	-	23	< 0.41		< 0.23	< 1.9		< 0.21	
3-21	-	45	< 0.33		0.47	< 1.5		0.24	
3-28	-	22	< 0.39		< 0.22	< 1.8		< 0.20	
4- 4	-	22	< 0.42		< 0.22			< 0.22	
4-11	-	25	< 0.30		< 0.16	< 1.4		< 0.16	
4-18	-	24	< 0.34		< 0.18	< 1.6	< 0.19	< 0.18	< 1.8

Results less than reporting limit are indicated by a (-).
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APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Ringold Farm (continued)									
4-25	-	20	< 0.51		< 0.28	< 2.4		< 0.27	< 2.8
5- 2	-	25	< 0.32		< 0.18	< 1.5		< 0.17	< 1.8
5- 9	-	26	< 0.37		< 0.20	< 1.7		< 0.19	< 2.0
5-16	-	14	< 0.36		< 0.20	< 1.6		< 0.19	
5-23	-	5.4	-		< 0.08	< 0.71	< 0.10	< 0.08	-
5-31	20	22	-		-	1.6		< 0.17	1.8
6- 6	17	29	< 0.53		< 0.32	< 2.4	< 0.89	< 0.27	< 2.9
6-25	-	6.8	< 0.17		< 0.10	< 0.09		< 0.09	
8- 1	-	26	< 0.50		< 0.28	< 0.26		< 0.26	< 6.1
Pasco Farm No. 1									
1- 3	-	32			0.10	-	-	0.09	-
1-10	-	31			-	1.0	-	0.05	-
1-17		28			0.09	0.28	-	0.08	-
1-24	-	29			-	-	-	0.05	-
1-31	-	29			-	-	-	0.07	-
2- 7	-	28			-	-	-	0.06	
2-14	-	31			-		-	-	-
2-21	-	28			-		-	-	
2-28	-	26			0.67	-	-	-	< 1.7
3- 7	-	26			0.21	< 1.5	< 0.30	< 0.17	
3-14	-	26			0.38	< 1.5		< 0.17	< 1.8
3-21	-	25			0.41	< 1.8		< 0.17	< 1.8
3-28	-	30			< 0.24	< 2.1		< 0.24	
4- 4	-	26			0.23	< 1.5		< 0.17	
4-11	-	24			< 0.16	< 1.4		< 0.16	< 1.7
4-18	-	23			< 0.22	< 1.9		< 0.22	< 2.3
4-25	-	22			< 0.17	< 1.5		< 0.17	< 1.8
5- 2	-	21			< 0.19	< 1.6		< 0.19	
5- 9	-	29			< 0.15	< 1.3		< 0.15	< 1.5
5-16	-	24			< 0.22	< 1.9		< 0.21	< 2.2
5-23	-	23			< 0.19	< 1.6		< 0.19	< 1.9
5-31	-	6.6			< 0.11	< 0.89		< 0.10	< 1.1

Results less than reporting limit are indicated by a (-).
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APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Pasco Farm No. 1 (continued)									
6- 6	3.2	7.3			< 0.16	< 1.2		< 0.14	< 1.5
6-13	-	7.2			< 0.11	< 0.9		< 0.10	< 1.1
6-20	41	6.7			< 0.19	< 1.4		< 0.16	< 1.7
6-27	-	6.5			< 0.15	< 1.2		< 0.14	< 1.4
7- 5	-	27	< 0.34		< 0.19	< 1.6		< 0.18	< 1.9
7-11	1.5	28			< 0.18	< 1.6		< 0.18	< 1.8
7-18	-	30			< 0.25	< 2.1	< 0.30	< 0.24	< 2.5
7-25	-	19			0.36	< 2.4		< 0.27	
8- 1	-	22			< 0.31	< 2.6	< 0.34	< 0.30	
8- 8	-	27			< 0.23	< 1.8		< 0.21	< 2.2
Pasco Farm No. 2									
1- 3		35	-		0.56		1.1	0.18	-
1-10		23			0.34	0.07	-	0.07	
1-17		20			0.12	-	-	0.12	-
1-24		17			0.61	-	-	0.19	-
1-31		19			0.19	-	-	0.29	-
2- 7		27			-		-	0.18	
2-14		29			0.06	-	-	0.19	-
2-21		15			-	-		0.18	-
2-28		25			< 0.16	< 1.4		< 0.16	< 1.6
3- 7		18			0.29	< 1.3		< 0.15	< 1.5
3-14		21			0.20	1.7		0.19	
3-21		24			< 0.18	< 1.4		< 0.16	
3-28		21			< 0.19	< 1.6		< 0.18	
4- 4		23			0.24	< 1.7		< 0.19	
4-11		25			< 0.15	< 1.6		< 0.15	
4-18		24			< 0.17	< 1.5		< 0.17	< 1.8
4-25		26			< 0.16	< 1.4		< 0.16	< 1.7
5- 2		< 2.4			< 0.20	< 1.7		0.26	< 2.1
5- 9		25			< 0.18	< 1.48		< 0.17	< 1.8
5-16		22			< 0.20	< 1.67		0.27	< 2.0
5-23		9.6			0.19	0.99	< 0.11	< 0.09	-

Results less than reporting limit are indicated by a (-).
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APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Pasco Farm No. 2 (continued)									
5-31		22			< 0.20	< 1.69		0.21	< 2.0
6- 6		17			0.33	< 1.24		< 0.14	< 1.5
6-20		25			< 0.32	< 2.39	< 1.1	< 0.27	< 2.9
6-27		19			< 0.20	< 1.62	< 0.36	< 0.18	
7- 6		22			< 0.19	< 1.66		< 0.19	< 2.0
7-11		7.9			< 0.11	< 0.95		< 0.11	< 1.1
7-18		6.1			< 0.14	< 1.14	< 0.17	< 0.13	< 1.4
7-25		23			< 0.24	< 1.89	< 0.48	< 0.22	
8- 1		8.2			< 0.16	< 1.39	< 0.19	< 0.16	
8- 8		5.8			< 0.06	< 0.43	< 0.14	< 0.05	-
8-15		6.3			< 0.06	< 0.47		< 0.05	-
8-22		7.2			< 0.07	< 0.57		< 0.06	-
8-29		22			< 0.18	< 1.46	< 0.29	< 0.17	< 1.7
9- 5		23			< 0.15	< 1.25		< 0.14	< 1.5
9-12		13			< 0.08	1.14		< 0.08	-
9-19		7.7			0.06	0.50		< 0.06	-
9-26		5.4			0.13	< 0.51		< 0.06	-
10- 3		20			< 0.15	< 1.2		< 0.14	< 1.5
10-10		24			0.33	< 1.2		< 0.14	< 1.4
10-17		24			< 0.21	< 1.8		< 0.20	< 2.1
10-26		23			< 0.16	< 1.4		< 0.16	< 3.6
10-31		20			< 0.18	< 1.5		< 0.17	< 3.9
11- 7		24			< 0.16	< 1.3		< 0.15	< 3.5
11-14		19			< 0.16	< 1.3		< 0.15	< 3.4
11-21		17			0.22	< 0.99		< 0.11	< 2.7
11-28		22			0.33	< 1.5		< 0.17	< 3.9
12- 5		20			< 0.14	< 1.2		< 0.14	< 3.2
12-12		22			< 0.17	< 1.4		< 0.16	< 3.7
12-19		17			< 0.12	< 0.94		< 0.11	< 1.1
12-27		17			< 0.15	< 1.2		< 0.14	< 1.4
Pasco Farm No. 3									
8-15	-	6.6	< 0.30		< 0.09	< 0.74		< 0.08	-

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Pasco Farm No. 3 (continued)									
8-22	-	14			0.12	< 0.76	< 0.14	< 0.09	-
8-29	-	8			< 0.09	< 0.75		< 0.08	-
9- 5	-	9.7			0.18	< 1.4		< 0.16	1.6
9- 5	-	22	< 0.28		< 0.15	< 1.3		< 0.15	
9-12	-	7.4			< 0.10	< 0.81		< 0.09	-
9-12	-	26			< 0.18	< 1.4		< 0.16	< 1.6
9-19	-	7.4			< 0.10	< 0.81		< 0.09	-
9-19	-	26			< 0.16	< 1.3		< 0.15	< 1.7
9-26	-	22			< 0.21	< 1.7		< 0.20	< 2.0
10- 3	-	28			< 0.21	< 1.7	< 0.33	< 0.19	< 2.0
10-10	-	29			< 0.19	< 1.5	< 0.28	< 0.18	< 1.8
10-17	-	20			< 0.17	< 1.4		< 0.16	< 1.7
10-24	-	24			< 0.19	< 1.4		< 0.18	< 3.8
11- 7	-	21			1.1	< 1.4	< 0.25	< 0.16	< 3.6
11-14	-	-			0.44	< 1.2		< 0.14	< 3.2
11-21	-	21			1.3	< 1.3		< 0.15	< 3.6
11-28	-	20			1.0	< 1.3		< 0.14	< 3.4
12- 5	-	23			0.29	< 1.2		< 0.14	< 3.3
Eltopia Farm No. 1									
1- 3		16			0.26	1.1	-	0.32	-
1-10		22			0.29	0.95	-	0.28	-
1-17		18			0.76	-	-	0.17	-
1-24		23			0.06	-	-	0.13	
1-31		21			0.37	0.90	0.16	0.19	-
2- 7		23			0.26	-	-	0.04	
2-14		29			0.68		-	0.10	-
2-21		23			1.1	< 1.5		< 0.17	< 1.8
2-28		21			-	-		-	-
3- 7		20			< 0.19	< 1.5	< 0.30	< 0.17	< 1.8
3-14		19			0.69	< 1.7		< 0.19	< 1.9
3-21		27			< 0.24	< 1.9		0.25	
3-28		24			< 0.26	< 2.2		0.30	

Results less than reporting limit are indicated by a (-).
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APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN HAY AND PASTURE GRASS - 1967

picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Eltopia Farm No. 1 (continued)									
4- 5		22			< 0.17	< 1.4		0.29	
4-11		22			0.25	< 1.5		0.18	< 1.8
4-18		20			< 0.18	< 1.5		< 0.18	< 1.8
4-25		25			< 0.16	< 1.3		0.38	< 1.6
5- 2		21			< 0.15	< 1.3		0.18	< 1.5
5- 9		24			< 0.18	< 1.5		< 0.18	< 1.8
5-16		30			< 0.21	< 1.8		< 0.21	< 1.7
5-23		29			< 0.17	< 1.4		< 0.17	
6- 6		25			< 0.29	< 2.2		< 0.25	< 2.7
6-13		30			< 0.19	< 1.6		< 0.18	< 1.9
6-20		21			0.29	< 2.0		< 0.23	< 2.4
6-27		26			< 0.24	< 1.9		< 0.22	< 2.3
7- 6		32			< 0.20	< 1.7		< 0.20	< 2.0
7-11		28			< 0.25	< 2.1		< 0.24	< 2.5
7-18		20			< 0.22	< 1.8	< 0.27	< 0.21	< 2.2
7-25		17			< 0.25	< 2.0	< 0.48	< 0.22	
8- 1		21			< 0.23	< 1.9		< 0.22	< 5.1
8- 8		31			< 0.17	< 1.4		< 0.15	< 1.6
8-15		15			< 0.10	< 0.8		< 0.10	-
8-22		32			< 0.20	< 1.7	< 0.24	< 0.19	< 2.0
8-29		30			< 0.20	< 1.6		< 0.18	< 1.9
9- 5		24			< 0.17	< 1.4		< 0.16	< 1.7
9-12		14			< 0.09	< 1.7		< 0.08	< 0.8
9-19		22			< 0.18	< 1.5		< 0.17	< 1.8
9-26		26			< 0.14	1.7		< 0.13	< 1.4
10- 4		24			< 0.22	< 1.8	< 0.33	< 0.21	< 2.2
10-10		24			0.42	< 0.88		< 0.10	< 1.0
10-17		26			0.45	< 1.3		< 0.15	< 1.6
10-24		25			< 0.14	< 1.1		< 0.13	< 3.0
10-31		28			< 0.17	< 1.3	< 0.27	< 0.15	< 3.6
11- 7		22			< 0.14	< 1.2	< 0.22	< 0.13	< 3.1
11-14		22			< 0.16	< 1.3		< 0.15	< 3.6
11-21		24			< 0.12	< 0.98		< 0.11	< 2.6
11-28		23			< 0.15	< 0.12		< 0.13	< 3.1

Results less than reporting limit are indicated by a (-).
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APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967

picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Eltopia Farm No. 1 (continued)									
12- 5		21			< 0.15	< 1.3		< 0.15	< 3.4
12-12		18	< 0.20		0.24	< 0.92		0.20	< 2.4
12-19		26			< 0.18	< 1.3	< 0.58	< 0.15	< 1.6
12-27		16			0.10	< 0.80	< 0.16	< 0.09	< 0.96
Eltopia Farm No. 2									
12- 5		24			< 0.16	< 1.3		< 0.15	< 3.5
12-12		24			< 0.16	< 1.3		< 0.15	< 3.6
12-19		30			< 0.16	< 1.2	< 0.51	< 0.14	< 1.4
12-27		18			< 0.14	< 1.1	< 0.26	< 0.13	< 1.3
West Richland Farm No. 1									
5-11		3.9			0.23	0.76		< 0.09	-
5-18		4.9			< 0.11	< 0.92	< 0.11	< 0.11	
5-25		6.0			< 0.09	< 0.79		< 0.09	-
6- 1		7.2			< 0.11	< 0.91		< 0.11	< 1.1
6- 8		6.1			< 0.10	< 0.77		< 0.09	-
6-15		9.0			< 0.14			< 0.13	
6-22		5.3			< 0.17	< 1.3	< 0.44	< 0.15	
6-29		6.9			< 0.12	< 0.94		< 0.11	< 1.1
7- 6		6.0			< 0.12	< 1.0		< 0.12	< 1.2
7-13		6.0			< 0.11	< 0.98	< 0.12	< 0.11	< 1.2
7-20		8.9			< 0.11	< 0.90	0.13	< 0.10	< 1.1
7-27		5.7			< 0.10	< 0.82	< 0.18	< 0.09	
8- 3		7.5			< 0.09	< 0.76		< 0.09	< 2.0
8-10		7.1			< 0.08	< 0.67	< 0.15	< 0.08	
8-17		6.8			< 0.07	< 0.60		< 0.07	-
8-24		6.8			< 0.08	< 0.71	< 0.12	< 0.08	-
8-31		5.5			< 0.07	< 0.62	< 0.11	< 0.07	-
9- 7		6.2			< 0.08	< 0.65		< 0.07	-
9-14		5.4			< 0.1	< 0.80		< 0.09	-
9-14		17			< 0.15	< 1.2		< 0.14	< 1.4
9-21		6.3			< 0.09	< 0.73		< 0.08	-
9-21		14			< 0.16	< 1.4		0.27	< 1.6

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
West Richland Farm No. 1 (continued)									
9-28		6			< 0.09	< 0.73		< 0.08	-
9-28		15			< 0.19	< 1.5		< 0.18	< 1.8
10- 5		6.2			< 0.16	< 1.3	< 0.22	< 0.15	< 1.6
10-12		6			1.30	< 1.0		< 0.12	< 1.3
10-19		4.9			0.14	< 0.81		< 0.09	-
10-26		5.2			< 0.11	< 0.91		< 0.10	< 2.4
11- 2		17	< 0.31		< 0.18	< 1.5	< 0.25	< 0.17	< 4.0
11- 9		16			< 0.17	< 1.4	< 0.22	< 0.17	< 3.7
11-16		11			< 0.13	< 1.1		< 0.12	< 2.8
11-22		13			< 0.17	< 1.3		< 0.15	< 3.6
11-30		14			< 0.16	< 1.3		< 0.15	< 3.5
12- 7		16			< 0.18	< 1.4		< 0.16	< 3.8
12-14		16			< 0.18	< 1.5		< 0.17	< 4.0
12-21		16			< 0.18	< 1.4	< 0.47	< 0.18	< 1.7
12-28		21			< 0.16	< 1.3	< 0.24	< 0.15	< 1.5
West Richland Farm No. 2									
1- 5		25			0.06	0.18	-	0.10	-
1-12		24			0.09	0.21	-	0.10	-
1-19		30			0.49	0.78	0.24	0.16	2.1
1-26		13			0.50	0.54	0.16	0.07	-
2- 2		27			0.04	1.3	-	0.06	
2- 9		28			-	0.32	-	0.03	-
2-16		29			-	-	-	0.07	
2-23		25			-		-	-	
3- 2		27			< 0.24			< 0.23	< 2.4
3- 9		22			< 0.18		< 0.26	0.23	
3-16		24			< 0.19	< 1.5		0.26	
3-24		21			< 0.18	< 1.5		< 0.17	
3-30		18			0.38	< 1.3		0.20	
4- 6		19			< 0.15	< 1.3		0.24	
4-13		19			0.30	< 1.5		< 0.17	< 1.8
4-20		18			< 0.14	< 1.2		0.15	< 1.4

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
West Richland Farm No. 2 (continued)									
4-27		14			< 0.18	< 1.4		0.36	< 1.7
5- 4		19			< 0.17	< 1.4		< 0.15	< 1.6
5-11		16			< 0.15	< 1.3		0.20	< 1.6
Benton City Farm									
1- 5		25			-	-		0.05	-
1-12		25			-	0.22		0.10	
1-19		27			0.03	-		0.18	-
1-26		21			0.06			-	-
2- 2		24			0.68	-		0.12	-
2- 9		23			1.0	-		0.05	-
2-16		26			-			0.06	-
2-23		26			0.19	-		0.15	-
3- 2		17			< 0.12	< 0.95		< 0.11	< 1.1
3- 9		18			< 0.19	< 1.5		< 0.17	
3-16		15			< 0.14	< 1.4		< 0.13	
3-24		17			< 0.13	< 1.1		< 0.12	
3-30		21			0.92	< 1.3		< 0.15	
4- 6		21			< 0.19	< 1.6		< 0.19	
4-13		18			< 0.21	< 1.7		< 0.20	< 2.1
4-20		17			< 0.12	< 0.98		< 0.11	< 1.2
4-27		27			1.3	< 1.1		< 0.22	< 2.3
5- 4		27			< 0.17	< 1.4		< 0.15	< 1.6
5-11		7.5			0.13	< 0.77		< 0.09	-
5-18		16			< 0.22	< 1.9		< 0.22	
5-25		1.0			0.11	< 0.75		< 0.09	-
6- 1		6.6			< 0.10	< 0.84		< 0.10	< 1.0
6- 8		6.4			< 0.10	< 0.80		< 0.09	-
6-15		5.5			< 0.11	< 0.94		< 0.11	< 1.1
6-22		6.7			< 0.14	< 1.1		< 0.12	< 1.3
6-29		6.6			< 0.21	< 0.97		< 0.11	< 1.2
7- 6		5.6			< 0.10	< 0.88		< 0.10	< 1.0
7-13		5.9			< 0.12	< 0.99		< 0.11	< 1.2

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Benton City Farm (continued)									
7-20		5.4			< 0.11	< 0.90	< 0.11	< 0.10	< 1.1
7-27		10			< 0.18	< 1.5		< 0.17	
8- 3		7.6			< 0.13	< 1.1	< 0.13	< 0.13	
8-10		7.4			< 0.07	< 0.56		< 0.06	-
8-17		7.2			< 0.09	< 0.72		< 0.08	-
8-24		9			< 0.10	< 0.80		< 0.09	-
8-31		5.3			< 0.08	< 0.67	< 0.11	< 0.08	-
9- 7		7.7			< 0.10	< 0.79		< 0.09	-
9-14		8.8			< 0.07	< 0.59		< 0.07	-
9-14		25			< 0.17	< 1.4		< 0.16	< 1.6
9-21		23			< 0.15	< 1.3		< 0.15	< 1.5
9-28		24			< 0.18	< 1.5		< 0.17	< 1.8
10- 5		23			< 0.14	< 1.2	< 0.20	< 0.14	< 1.4
10-12		21			< 0.14	< 1.2		< 0.14	< 1.4
10-19		25			< 0.17	< 1.4		< 0.16	< 1.7
10-26		24			< 0.17	< 1.4	< 0.23	< 0.16	< 3.8
11- 2		23			< 0.17	< 1.4		< 0.16	< 3.8
11- 9		21			< 0.14	< 1.2		< 0.14	< 3.1
11-16		24			< 0.15	< 1.2		< 0.14	< 3.3
11-22		22			< 0.17	< 1.4		< 0.15	< 3.6
11-30		24			< 0.16	< 1.3		< 0.14	< 3.4
12- 7		68			< 0.15	< 1.2		< 0.13	< 3.1
12-14		24			< 0.16	< 1.4		0.17	< 3.6
12-21		22			< 0.16	< 1.2	< 0.42	< 0.14	< 1.5
12-28		21			< 0.14	< 1.2	< 0.22	< 0.13	< 1.4
Mesa Farm									
4-26		27			< 0.19	< 1.6		< 0.19	< 1.9
5- 3		20			< 0.18	< 1.5		< 0.18	< 1.8
5-10		6.4			< 0.08	< 0.73		< 0.08	-
5-17		25			< 0.19	< 1.6		< 0.18	< 1.9
5-24		21			< 0.21	< 1.8		0.28	< 2.1
5-31		25			< 0.20	< 1.7		< 0.20	< 2.0

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 2 (Continued)

CONCENTRATIONS OF RADIONUCLIDES IN
HAY AND PASTURE GRASS - 1967
picocuries/gram

Date	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit	1.0	0.4	0.1	0.002	0.03	0.06	0.05	0.03	1.0
Mesa Farm (continued)									
6- 7		24			< 0.23	< 1.8		< 0.21	< 2.2
6-14		22			< 0.20	< 1.6		0.25	< 2.0
6-21		15			< 0.21	< 1.6	< 0.60	< 0.18	
6-28		26			< 0.17	< 1.4		< 0.16	< 1.6
7- 5		26			< 0.21	< 1.8	< 0.25	< 0.21	< 2.2
7-13		26			< 0.23	< 1.9	< 0.25	< 0.22	3.1
7-19		27			< 0.22	< 1.8	< 0.25	< 0.21	< 2.2
7-26		29			< 0.26	< 2.1	< 0.47	< 0.24	
8- 2		25			< 0.25	< 2.1	< 0.26	< 0.25	
8- 9		25			< 0.18	< 1.4		< 0.16	< 1.7
8-16		26			< 0.18	< 1.4		0.18	< 1.7
8-22		14	< 0.32		< 0.18	< 1.5		< 0.17	< 1.8
8-30		9.5	< 0.18		< 0.10	< 0.83		< 0.09	-
9- 6		8.2	< 0.20		< 0.11	< 0.93		< 0.11	< 1.1
9-13		7.3	0.68		< 0.14	< 1.1		< 0.13	< 1.3
9-20		9.4	0.42		< 0.19	< 1.6		< 0.18	< 1.9
9-27		9.4	< 0.25		< 0.14	< 1.2		< 0.13	< 1.4
10- 4		6.4	< 0.17		0.22	0.97	0.19	< 0.09	-
10-11		6.0	< 0.16		< 0.09	< 0.73		< 0.08	-
10-18		5.8	0.32		< 0.08	< 0.7		< 0.08	-
10-25		5.3	< 0.19		0.40	< 0.85		< 0.10	< 2.3
11- 1		7.8	< 0.13		< 0.07	< 0.58		< 0.07	< 1.5
11- 8		24	< 0.34		< 0.19	< 1.6		< 0.18	< 4.1
11-15		25	< 0.26		< 0.14	< 1.2		< 0.14	< 3.2
11-21		23			< 0.14	< 1.1		< 0.13	< 3.0
11-28		22			< 0.16	< 1.3		< 0.15	< 3.5
12- 6		28			< 0.21	< 1.6		< 0.18	< 4.4
12-13		23			< 0.17	< 1.4		< 0.16	< 3.7
12-20		22	< 0.27		< 0.16	< 1.2	< 0.45	< 0.14	< 1.5
12-27		28			< 0.17	< 1.4	< 0.27	< 0.16	< 1.6

Results less than reporting limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 3

CONCENTRATIONS OF RADIONUCLIDES IN MEAT AND FISH
PURCHASED FROM LOCAL MARKETS - 1967
picocuries/gram

Date	Produce	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit		0.4	0.1	0.002	0.05	0.03	1.0
1-17	Veal	2.5	-	-		0.04	
3-21	Pork Chops	2.0		-		< 0.06	
3-21	Pork Chops	2.4		0.002		< 0.06	
3-21	Pork Chops	2.4		< 0.002		< 0.07	
4-18	Liver	2.5		-		< 0.04	
4-18	Liver	2.3		< 0.002		< 0.06	
4-18	Liver	2.5		< 0.002		< 0.05	
5-18	Ocean Fish	3.0	-	< 0.002		-	
5-18	Ocean Fish	2.9	0.16	< 0.002		< 0.05	
5-18	Ocean Fish	2.6	0.41	< 0.002		< 0.05	
6-20	Ground Round	2.5		-	< 0.05	0.07	
6-20	Ground Round	2.8		0.003	< 0.06	0.11	
6-20	Ground Round	2.7		0.002	< 0.05	0.09	
7-18	Lamb Chop	1.7		0.011	< 0.06	< 0.07	
7-18	Lamb Chop	2.1		0.006	< 0.06	0.09	
7-18	Lamb Chop	1.9		0.002	< 0.06	< 0.06	
9-19	Pork Roast	2.5		-		< 0.04	-
9-19	Pork Roast	1.9		-		< 0.04	-
9-19	Pork Roast	2.0		-		< 0.04	
10-17	Round Steak	2.9		-	-	0.04	
10-17	Round Steak	2.7		-	-	< 0.04	
10-17	Round Steak	2.4		0.003	-	< 0.04	
12-22	Ground Round	2.0	-	0.002		< 0.04	
12-22	Ground Round	2.2	-	-	< 0.08	< 0.05	
12-22	Ground Round	2.5	-	-	< 0.07	< 0.04	
12-22	Ground Round	2.4	-			< 0.04	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 4

CONCENTRATIONS OF RADIONUCLIDES IN
LOCALLY GROWN FRUITS AND VEGETABLES - 1967
picocuries/gram

Date	Produce	^{32}P	^{40}K	^{65}Zn	^{95}Zr-Nb	^{106}Ru	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit		1.0	0.4	0.1	0.03	0.06	0.05	0.03	1.0
6-28	Cherries		2.4		< 0.07		< 0.07	< 0.07	
6-28	Cherries		2.0		< 0.05		< 0.06	< 0.05	
6-28	Asparagus		1.4		< 0.06		< 0.07	< 0.06	
6-28	Strawberries		1.8		< 0.06		< 0.06	< 0.06	
6-29	Peas	-	8.2	0.40	< 0.07		0.11	< 0.07	
6-29	Beans	-	2.8	-			< 0.11	< 0.11	
6-29	Apricots		1.9	-				< 0.09	
6-29	Lettuce	-	2.4	-			< 0.14	< 0.08	
6-29	Apples	-	1.3	-				< 0.09	
6-29	Cherries	-	1.5	-				0.06	
6-29	Cherries	-	2.6	-			< 0.06	< 0.06	
6-29	Apricots	-	2.0	-			< 0.07	< 0.06	
6-29	Tomatoes	-	2.4	-			< 0.06	< 0.06	
7- 6	Apricots	-	2.1	-				< 0.07	-
8- 1	Lettuce	-	4.4	< 0.19		< 0.88	< 0.10	< 0.10	
8- 1	Apricots	-	2.9	-	< 0.04	< 0.37		< 0.04	
8- 1	Peaches	-	1.9	-	< 0.05		< 0.05	< 0.05	
8-17	Tomatoes	-	1.9	-			< 0.06	< 0.04	
8-17	Potatoes	-	3.3	-	< 0.05			< 0.05	
8-17	Lettuce	-	1.3	< 0.13				< 0.07	
8-18	Eggplant	-	1.7	< 0.11				< 0.06	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 5

CONCENTRATIONS OF RADIONUCLIDES IN
CHICKEN AND EGGS FROM LOCAL FARMS - 1967
picocuries/gram

Date	Type	^{32}P	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs
Analytical Limit		1.0	0.4	0.1	0.002	0.05	0.03
Riverview Irrigation District							
3-22	Eggs	-	1.1	-	0.002		< 0.04
3-22	Eggs	-	1.1	-	0.003		< 0.04
3-22	Chicken	-	2.0	0.45	-		< 0.07
3-22	Chicken	-	1.5	0.41	-		< 0.05
6-26	Eggs	-	1.1	-	0.002		< 0.05
6-26	Eggs	-	0.95	-	0.002		< 0.04
9-19	Eggs	-	1.0		0.004	-	< 0.04
9-19	Eggs	-	0.97		-	-	< 0.04
9-19	Chicken	-	1.8	-	-	-	< 0.04
9-19	Chicken	-	1.9	-	-	-	< 0.05
Ringold Farm No. 2							
3-28	Eggs	-	0.94	0.63	0.005		< 0.04
3-28	Eggs	-	0.95	0.82	0.008		< 0.05
3-28	Chicken	-	2.0	0.76	0.006		< 0.07
3-28	Chicken	-	2.6	2.6	-		< 0.07
6-27	Chicken	-	2.4	1.4	0.002		< 0.05
6-27	Chicken	-	2.6	1.9	-		< 0.07
6-27	Eggs	3.4	1.1	2.5	0.014		< 0.05
6-27	Eggs	2.8	< 1.4	3.4	0.007		< 0.12
9-26	Chicken	48	2.2	9.3	0.003		< 0.05
9-26	Chicken	67	2.6	7.6	-		< 0.05
9-26	Eggs	210	1.3	20	0.004		< 0.06
9-26	Eggs	230	1.2	17	-		< 0.05

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX F
TABLE 6

CONCENTRATIONS OF RADIONUCLIDES IN CHICKEN AND EGGS
PURCHASED FROM LOCAL STORES - 1967

picocuries/gram

Date	Type	^{40}K	^{65}Zn	^{90}Sr	^{131}I	^{137}Cs	^{144}Ce-Pr
Analytical Limit		0.4	0.1	0.002	0.05	0.03	1.0
2-21	Chicken	1.8		-			-
2-21	Chicken	1.6		0.003			
2-21	Chicken	2.1		-			-
3-21	Eggs	0.96		0.005		< 0.04	
3-21	Eggs	0.89		0.003		< 0.04	
7-18	Eggs	0.91		0.004	-	< 0.04	
7-18	Eggs	1.0		0.005	-	< 0.04	
8-24	Chicken	4.9	-	0.002	0.14	< 0.04	
8-24	Chicken	1.9	-	0.004	< 0.06	< 0.04	
8-24	Chicken	1.7	-	-	< 0.06	< 0.04	
11-22	Turkey	1.9	-	-		< 0.04	

Results less than analytical limit are indicated by a (-).
No entry indicates no analysis made.

APPENDIX G

^{131}I IN BEEF THYROIDS

APPENDIX G
TABLE 1

^{131}I IN BEEF THYROIDS FROM CATTLE
SLAUGHTERED AT SEVERAL LOCATIONS - 1967
Picocuries/gram

Date Sampled	Thyroid Wt (g)	^{131}I Concentration	Grazing Area
Pasco, Washington			
1- 3	20	2	Pasco
1- 6	32	15	Milton-Freewater, Oregon
1- 6	33	< 1	Warden
1- 9	32	15	Prosser
1- 9	25	23	Mesa
1- 9	24	24	Kennewick
1-16	32	13	Prosser
1-17	32	21	Mesa
1-18	13	38	Benton City
1-23	29	10	Pasco
1-24	37	< 1	Mesa
1-27	25	< 1	Eltopia
1-30	33	7	Walla Walla
2- 1	75	18	West Richland
2- 3	68	< 1	Connell
2- 8	35	< 1	Warden
2- 9	20	< 1	Prosser
2- 9	20	< 1	Pasco
2-14	66	1	Warden
2-14	39	< 1	Cunningham
2-15	32	< 1	Milton-Freewater, Oregon
2-20	14	24	Milton-Freewater, Oregon
2-21	40	< 1	Kennewick
2-23	33	5	Pasco
2-27	25	17	Othello
3- 1	24	4	Milton-Freewater, Oregon
3- 2	23	5	Kennewick
3- 5	50	2	Moses Lake
3- 8	39	< 1	Prosser
3-10	34	< 1	Walla Walla
3-13	34	< 1	Walla Walla
3-13	19	< 1	Walla Walla
3-14	15	2	Walla Walla
3-20	23	< 1	Prosser
3-21	36	< 1	Warden
3-22	31	< 1	Walla Walla
3-27	33	< 1	Moses Lake
3-28	78	2	Kennewick
3-29	29	< 1	Hermiston, Oregon
4- 5	64	< 1	
4- 5	24	6	
4- 6	33	< 1	

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Pasco, Washington (continued)			
4-10	32	< 1	Mesa
4-11	35	< 1	Pasco
4-13	23	< 1	Connell
4-17	25	18	Benton City
4-18	33	< 1	Prosser
4-18	38	7	Lexington, Oregon
4-24	31	< 1	Warden
4-24	24	2	Hermiston, Oregon
4-25	36	< 1	Pasco
5- 1	31	< 1	Mesa
5- 2	36	1	Eltopia
5- 5	43	< 1	Eltopia
5- 8	25	< 1	Moses Lake
5- 9	13	< 1	Prosser
5-10	21	7	Walla Walla
5-17	28	< 1	Mesa
5-18	70	3	Walla Walla
5-19	27	2	Quincy
5-23	35	2	Milton-Freewater, Oregon
5-24	36	< 1	Kahlotus
5-25	45	< 1	Connell
5-29	22	13	Walla Walla
5-31	55	< 1	Connell
6- 1	30	2	Burbank
6- 3	22	3	Warden
6- 6	31	3	Kennewick
6- 7	18	6	Kahlotus
6-12	26	10	West Richland
6-14	28	< 1	Grandview
6-14	27	< 1	Pasco
6-19	16	< 1	Burbank
6-20	51	< 1	Moses Lake
6-21	41	< 1	Walla Walla
6-25	32	< 1	Quincy
6-29	42	< 1	Walla Walla
6-29	35	< 1	Pasco
7- 3	41	1	Kahlotus
7- 5	61	< 1	Prosser
7- 6	23	< 1	Mesa
7-10	42	< 1	Warden
7-11	63	< 1	Pasco
7-12	40	6	Walla Walla
7-17	33	2	Patterson
7-18	32	5	Mesa
7-19	22	2	Benton City

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Pasco, Washington (continued)			
7-25	34	< 1	Prosser
7-25	29	2	Hermiston, Oregon
7-26	32	< 1	Connell
7-31	32	< 1	Mesa
8- 1	35	< 1	Prosser
8- 2	37	< 1	Pasco
8- 7	38	< 1	Walla Walla
8- 8	32	< 1	Warden
8- 9	60	< 1	Kennewick
8-14	35	< 1	Kennewick
8-16	51	2	Hermiston, Oregon
8-15	17	< 1	Prosser
8-21	47	< 1	Connell
8-22	25	< 1	Eltopia
8-22	47	< 1	Pasco
8-25	36	< 1	Kennewick
8-25	26	< 1	LaGrande, Oregon
8-28	34	< 1	Walla Walla
8-31	46	< 1	Hermiston, Oregon
9- 5	32	< 1	Royal City
9- 5	32	< 1	Burbank
9- 8	19	1	Moses Lake
9- 8	38	2	Prosser
9-14	41	1	Pasco
9-18	21	< 1	Mesa
9-18	35	< 1	Warden
9-19	50	< 1	LaGrande, Oregon
9-25	37	< 1	Walla Walla
9-25	32	< 1	Connell
9-26	25	< 1	Eltopia
9-29	32	3	Prosser
9-29	45	16	Hermiston, Oregon
10- 2	25	< 1	Mesa
10- 6	64	3	Burbank
10- 6	32	5	Eltopia
10- 9	39	< 1	Mesa
10-15	30	5	Kennewick
10-16	28	< 1	Walla Walla
10-17	36	4	Moses Lake
10-26	25	< 1	Prosser
10-25	26	< 1	Othello
10-24	29	< 1	Dayton
10-27	47	< 1	Walla Walla
10-27	18	1	Patterson
11- 2	22	< 1	Eltopia

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Pasco, Washington (continued)			
11- 3	32	< 1	Warden
11- 6	37	< 1	Kennewick
11- 7	22	< 1	Burbank
11-10	35	9	Patterson
11-13	22	2	Pasco
11-14	20	2	Moses Lake
11-20	42	< 1	Prosser
11-22	46	< 1	Moses Lake
11-22	150	< 1	Warden
11-24	56	< 1	Prosser
11-26	21	< 1	Kahlotus
11-28	46	5	Walla Walla
12- 4	53	< 1	Mesa
12- 4	30	< 1	Burbank
12- 6	31	< 1	Othello
12-11	22	< 1	Dayton
12-12	35	< 1	Kennewick
12-13	53	< 1	Prosser
12-18	28	< 1	Kahlotus
12-18	40	2	Moses Lake
12-21	30	< 1	Eltopia
12-22	35	< 1	Warden
12-26	28	< 1	Richland
12-27	55	< 1	Walla Walla
12-29	52	< 1	Basin City
12-29	31	< 1	Prosser
1- 3	29	< 1	Mesa
Moses Lake, Washington			
1- 7	28	43	Mesa
1- 7	33	59	Mesa
1- 7	36	16	Mesa
1- 7	25	29	Moses Lake
1- 7	33	8	Moses Lake
1-21	43	< 1	Ritzville
1-21	63	1	Moses Lake
1-21	47	102	Moses Lake
1-21	51	3	Wilson Creek
1-21	32	128	Warden
2- 5	58	< 1	Ritzville
2- 5	70	< 1	Ritzville
2- 5	55	< 1	Othello
2- 5	62	< 1	Pasco
2- 5	47	2	Wilson Creek
2-25	42	45	Lind

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Moses Lake, Washington		(continued)	
2-25	43	46	Lind
2-25	32	< 1	Lind
2-25	44	25	Lind
2-25	37	40	Lind
3- 9	77	< 1	Mesa
3- 9	29	5	Mesa
3- 9	65	6	Mesa
3- 9	77	2	Mesa
3- 9	50	5	Connell
3-25	48	< 1	Warden
3-25	25	2	Moses Lake
3-25	48	< 1	Moses Lake
3-25	30	3	Lind
3-25	38	< 1	Coulee City
4- 6	79	< 1	Moses Lake
4- 6	40	< 1	Moses Lake
4- 6	47	< 1	Moses Lake
4- 6	40	< 1	Moses Lake
4- 6	53	< 1	Warden
4-20	46	< 1	Othello
4-20	46	11	Othello
4-20	57	< 1	Othello
4-20	45	1	Othello
4-20	56	1	Othello
5-11	24	< 1	Moses Lake
5-11	51	< 1	Moses Lake
5-11	24	< 1	Othello
5-11	39	< 1	Othello
5-11	36	< 1	Othello
5-27	47	< 1	Warden
5-27	28	2	Odessa
5-27	26	< 1	Quincy
5-27	53	6	Royal City
5-27	44	< 1	Othello
6-10	32	< 1	Othello
6-10	55	< 1	Moses Lake
6-10	62	< 1	Moses Lake
6-10	26	2	Ellensburg
6-10	26	< 1	Ritzville
6-24	54	< 1	Moses Lake
6-24	37	1	Moses Lake
6-24	22	< 1	Moses Lake
6-24	42	< 1	Othello
6-24	44	< 1	Benton City
7- 8	55	< 1	Moses Lake

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Moses Lake, Washington (continued)			
7- 8	59	< 1	Moses Lake
7- 8	36	< 1	Moses Lake
7- 8	28	1	Moses Lake
7- 8	35	1	Warden
7-22	54	1	Moses Lake
7-22	21	< 2	Moses Lake
7-22	48	< 1	Moses Lake
7-22	35	< 1	Walla Walla
7-22	48	< 1	Othello
8- 5	51	< 1	Moses Lake
8- 5	39	1	Moses Lake
8- 5	48	< 1	Benton City
8- 5	26	< 1	Cunningham
8- 5	60	1	Walla Walla
8-19	26	2	Moses Lake
8-19	35	1	Moses Lake
8-19	40	2	Moses Lake
8-19	28	< 1	Cunningham
8-19	38	< 1	Cunningham
9- 2	33	< 1	Moses Lake
9- 2	64	< 1	Moses Lake
9- 2	36	< 1	Ephrata
9- 2	30	< 1	Ephrata
9- 2	54	< 1	Ephrata
9-16	39	1	Moses Lake
9-16	56	< 1	Moses Lake
9-16	35	1	Moses Lake
9-16	39	1	Moses Lake
9-16	62	< 1	Moses Lake
9-30	67	< 1	Moses Lake
9-30	35	< 1	Moses Lake
9-30	62	< 1	Moses Lake
9-30	61	< 1	Othello
9-30	31	< 1	Warden
10-14	58	< 1	Moses Lake
10-14	36	< 1	Moses Lake
10-14	37	< 1	Moses Lake
10-14	15	< 1	Moses Lake
10-14	24	< 1	Marlin
10-28	44	< 1	Moses Lake
10-28	44	< 1	Moses Lake
10-28	16	< 1	Moses Lake
10-28	34	< 1	Royal City
10-28	43	< 1	Royal City
11-10	31	2	Moses Lake

APPENDIX G
TABLE 1 (continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Moses Lake, Washington (continued)			
11-10	73	< 1	Moses Lake
11-10	39	< 1	Moses Lake
11-10	38	< 1	Moses Lake
11-10	53	< 1	Moses Lake
11-25	28	< 1	Cunningham
11-25	18	< 1	Cunningham
11-25	47	< 1	Moses Lake
11-25	31	< 1	Moses Lake
11-25	31	< 1	Moses Lake
12- 9	22	< 1	Moses Lake
12- 9	50	< 1	Moses Lake
12- 9	46	< 1	Moses Lake
12- 9	40	1	Moses Lake
12- 9	56	< 1	Moses Lake
12-21	36	2	Moses Lake
12-21	56	< 1	Moses Lake
12-21	47	< 1	Moses Lake
12-21	46	1	Royal City
12-21	42	2	Royal City
Toppenish, Washington			
1-13	38	16	Wapato
1-13	42	3	Wapato
1-13	36	16	Ahtanum
1-13	38	21	Ahtanum
1-13	28	22	Zillah
1-27	32	3	Wapato
1-27	25	33	Selah
1-27	31	15	Selah
1-27	32	4	Zillah
2-10	33	< 1	Ahtanum
2-10	34	< 1	Ahtanum
2-10	45	< 1	Ahtanum
2-10	70	< 1	Ahtanum
2-10	34	< 1	Yakima
2-24	57	1	Toppenish
2-24	80	< 1	Wapato
2-24	88	< 1	Wapato
2-24	58	< 1	Wiley City
2-24	55	< 1	Wiley City
3-10	26	< 1	Yakima
3-10	44	< 1	Yakima
3-10	31	< 1	Yakima
3-10	51	3	Moxee
3-24	46	< 1	Yakima

APPENDIX G
TABLE 1 (continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Toppenish, Washington (continued)			
3-24	27	< 1	Yakima
3-24	39	< 1	Yakima
3-24	34	< 1	White Swan
3-24	32	< 1	Selah
4- 7	35	< 1	Ahtanum
4- 7	34	< 1	Ahtanum
4- 7		< 1	Wapato
4- 7	55	< 1	Zillah
4-21	39	< 1	Ahtanum
4-21	60	< 1	White Swan
4-21	35	< 1	White Swan
4-21	44	< 1	White Swan
4-21	35	< 1	White Swan
5- 5	120	< 1	White Swan
5- 5	64	< 1	Toppenish
5- 5	56	< 1	Ahtanum
5- 5	30	< 1	Ahtanum
5- 5	41	< 1	Ahtanum
5-19	28	< 1	Wapato
5-19	37	< 1	Yakima
5-19	18	< 1	Yakima
5-19	29	< 1	Toppenish
5-19	45	< 1	Toppenish
6- 2	22	1	Toppenish
6- 2	37	< 1	Toppenish
6- 2	48	< 1	Toppenish
6- 2	60	< 1	Toppenish
6- 2	34	< 1	Toppenish
7-14	47	3	Yakima
7-14	52	1	Yakima
7-14	31	< 1	Toppenish
7-14	26	1	Harrah
7-14	59	2	Harrah
Wapato, Washington			
7-28	28	2	Toppenish
7-28	43	< 1	Wiley City
7-28	72	< 1	Wiley City
7-28	49	2	Tampico
7-28	38	< 1	Harrah
8-11	37	< 1	Toppenish
8-11	110	< 1	Harrah
8-11	42	1	Tampico
8-11	34	< 1	Satus
8-11	28	2	Satus

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Wapato, Washington (continued)			
8-25	33	2	Toppenish
8-25	35	< 1	Toppenish
8-25	26	2	White Swan
8-25	32	2	Sunnyside
8-25	29	1	Wapato
9- 8	28	< 1	Gleed
9- 8	24	< 1	Gleed
9- 8	38	< 1	Gleed
9- 8	31	< 1	Gleed
9- 8	32	< 1	Gleed
9-22	50	< 1	Toppenish
9-22	64	< 1	Toppenish
9-22	47	< 1	Toppenish
9-22	39	< 1	Toppenish
9-22	76	< 1	Tampico
10- 6	65	< 1	Moxie
10- 6	130	< 1	Moxie
10- 6	160	< 1	Ahtanum
10- 6	160	< 1	Ahtanum
10- 6	75	< 1	Wiley City
10-20	150	< 1	Tampico
10-20	140	< 1	Wapato
10-20	58	< 1	Wapato
10-20	160	< 1	White Swan
10-20	87	< 1	Granger
11- 3	29	< 1	Toppenish
11- 3	100	< 1	Wapato
11- 3	13	< 1	White Swan
11- 3	73	< 1	Selah
11- 3	30	< 1	Tampico
11-17	72	< 1	Tampico
11-17	95	< 1	Toppenish
11-17	36	< 1	Moxie
11-17	43	< 1	Moxie
11-17	87	< 1	Moxie
12- 1	93	< 1	Wapato
12- 1	66	< 1	Wapato
12- 1	52	< 1	Wapato
12- 1	45	< 1	Wapato
12- 1	58	< 1	Wapato
12-15	88	< 1	Wapato
12-15	80	< 1	Wapato
12-15	30	< 1	Wapato
12-15	47	< 1	Wapato
12-15	63	< 1	Toppenish

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Wapato, Washington (continued)			
12-29	45	< 1	Toppenish
12-29	31	< 1	Toppenish
12-29	76	< 1	Toppenish
12-29	21	< 1	Zillah
12-29	18	< 1	Zillah
Walla Walla, Washington			
1- 6	47	92	Walla Walla
1- 6	37	1	Walla Walla
1- 6	29	2	Walla Walla
1- 6	26	163	Walla Walla
1- 6	20	3	Mill Creek
1-27	30	< 1	Lowden
1-27	45	2	Lowden
1-27	43	< 1	Dixie
1-27	40	2	Walla Walla
1-27	29	1	Walla Walla
2-24	28	< 1	Walla Walla
2-24	23	< 1	Walla Walla
2-24	31	< 1	Walla Walla
2-24	29	< 1	Walla Walla
2-24	41	< 1	Lowden
3- 3	62	< 1	Walla Walla
3- 3	26	< 1	Lowden
3- 2	22	< 1	Lowden
3- 3	35	< 1	Lowden
3- 3	31	< 1	LaGrande, Oregon
3-30	24	< 1	Lowden
3-30	35	< 1	Lowden
3-30	28	< 1	Starbuck
3-30	23	< 1	Starbuck
3-30	31	< 1	Starbuck
4-18	30	< 1	Walla Walla
4-18	20	< 1	Walla Walla
4-18	18	< 1	Walla Walla
4-18	18	< 1	Walla Walla
4-18	28	< 1	Walla Walla
4-25	36	< 1	Walla Walla
4-25	25	< 1	Walla Walla
4-25	28	< 1	Walla Walla
4-25	25	< 1	Walla Walla
4-25	13	3	Walla Walla

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Walla Walla, Washington (continued)			
5- 4	50	< 1	Walla Walla
5- 4	59	< 1	Walla Walla
5- 4	35	< 1	Walla Walla
5- 4	50	< 1	Walla Walla
5- 4	32	< 1	Umapine, Oregon
6-13	34	< 1	Walla Walla
6-13	53	< 1	Walla Walla
6-13	36	< 1	Lowden
6-13	29	< 1	Lowden
6-13	31	< 1	Lowden
7-20	57	< 1	Walla Walla
7-20	50	< 1	Walla Walla
7-20	25	< 1	Walla Walla
7-20	13	5	Blue Mountains
7-20	13	3	Blue Mountains
7-27	30	< 1	Touchet
7-27	42	< 1	Touchet
7-27	34	< 1	Lowden
7-27	36	3	Blue Mountains
7-27	33	3	Blue Mountains
8-10	24	< 1	Walla Walla
8-10	26	< 1	Walla Walla
8-10	37	< 1	Walla Walla
8-10	36	1	Walla Walla
8-10	34	< 1	Lowden
8-25	38	< 1	Walla Walla
8-25	30	< 1	Walla Walla
8-25	19	< 1	Walla Walla
8-25	37	< 1	Lowden
8-25	46	< 1	Lowden
9-14	33	< 1	Walla Walla
9-14	17	2	Walla Walla
9-14	37	< 1	Walla Walla
9-14	43	1	Walla Walla
9-14	62	< 1	Walla Walla

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Walla Walla, Washington (continued)			
9-19	34	< 1	Walla Walla
9-19	52	< 1	Walla Walla
9-19	56	< 1	Walla Walla
9-19	20	< 1	Walla Walla
9-19	63	< 1	Walla Walla
10-13	39	< 1	Walla Walla
10-13	25	< 1	Walla Walla
10-13	31	< 1	Walla Walla
10-13	53	< 1	Lowden
10-13	30	< 1	College Place
11- 2	37	< 1	Dixie
11- 2	23	1	Dixie
11- 2	20	< 1	Walla Walla
11- 2	29	< 1	Dixie
11- 2	36	1	Walla Walla
11- 9	30	< 1	Walla Walla
11- 9	26	< 1	Walla Walla
11- 9	45	< 1	Walla Walla
11- 9	35	< 1	Walla Walla
11- 9	41	< 1	Walla Walla
11-17	53	< 1	Touchet
11-17	27	< 1	Lowden
11-17	39	< 1	Lowden
11-17	47	< 1	Walla Walla
11-17	34	< 1	Walla Walla
12-19	31	< 1	Walla Walla
12-19	31	< 1	Walla Walla
12-19	25	< 1	Walla Walla
12-19	34	< 1	Walla Walla
12-19	44	< 1	Walla Walla
Wenatchee, Washington			
1-23	31	< 1	Grant County
1-23	29	58	Grant County
1-23	39	27	Grant County
1-23	22	3	Douglas County
1-23	36	3	Douglas County
2-21	27	3	Grant County
2-21	32	1	Grant County
2-21	43	4	Douglas County
2-21	32	1	Douglas County
2-21	48	6	Douglas County
3- 7	45	< 1	Grant County
3- 7	29	< 1	Grant County
3- 7	27	< 1	Grant County

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Wenatchee, Washington		(continued)	
3- 7	39	< 1	Grant County
3- 7	30	< 1	Grant County
3-27	33	< 1	Grant County
3-27	42	< 1	Grant County
3-27	34	< 1	Grant County
3-27	36	< 1	Grant County
3-27	33	< 1	Grant County
4-12	47	< 1	S.E. Chelan County
4-12	47	< 1	S.E. Chelan County
4-12	45	< 1	S.E. Chelan County
4-12	42	< 1	S.E. Chelan County
4-12	71	< 1	S.E. Chelan County
5- 9	40	< 1	W. Douglas County
5- 9	32	< 1	S.E. Chelan County
5- 9	46	< 1	N. Douglas County
5- 9	43	< 1	N. Douglas County
5- 9	37	< 1	N. Grant County
5-16	51	< 1	S.E. Chelan County
5-16	51	< 1	S.E. Chelan County
5-16	36	< 1	S.E. Chelan County
5-16	48	< 1	S.E. Chelan County
5-16	42	< 1	W. Grant County
6-13	66	< 1	S.E. Chelan County
6-13	67	< 1	S.E. Chelan County
6-13	43	< 1	N. Douglas County
6-13	41	< 1	N. Douglas County
7-11	21	1	S. Chelan County
7-11	28	1	S. Chelan County
7-11	35	< 1	S. Chelan County
7-11	25	< 1	Douglas County
7-11	41	< 1	Douglas County
7-25	37	< 1	Grant County
7-25	29	< 1	Grant County
7-25	36	< 1	Grant County
7-25	32	1	N. Douglas County
7-25	55	1	N. Douglas County
8-29	40	< 1	S.E. Chelan County
8-29	29	1	S.E. Chelan County
8-29	36	2	S.E. Chelan County
8-29	47	2	S.E. Chelan County
8-29	41	1	S.E. Chelan County
10-23	45	< 1	S. Central Chelan
10-23	26	< 1	S. Central Chelan
10-23	48	< 1	S. Central Chelan
10-23	25	< 1	S. Central Chelan

APPENDIX G
TABLE 1 (Continued)

Date Sampled	Thyroid Wt (g)	Picocuries/gram ^{131}I Concentration	Grazing Area
Wenatchee, Washington (continued)			
10-23	41	< 1	S. Central Chelan
10-30	24	< 1	S.E. Chelan County
10-30	40	< 1	S.E. Chelan County
10-30	88	< 1	S.E. Chelan County
10-30	37	< 1	S.E. Chelan County
10-30	68	< 1	S.W. Douglas County
11-14	32	< 1	S.E. Chelan County
11-14	84	< 1	S.E. Chelan County
11-14	39	< 1	Central Douglas Co.
11-14	32	< 1	S.W. Douglas County
11-14	24	< 1	S.W. Douglas County
11-28	45	< 1	N.E. Chelan County
11-28	31	< 1	N.E. Chelan County
11-28	43	< 1	N.E. Chelan County
11-28	46	< 1	N.E. Chelan County
11-28	28	< 1	S.E. Chelan County

APPENDIX H

MEASUREMENTS OF EXTERNAL RADIATION EXPOSURE

APPENDIX H
TABLE 1

IONIZATION CHAMBER MEASUREMENTS FOR THE HANFORD RESERVATION AND RICHLAND - 1967

Measurement Period	Exposure Rate mR/Day Richland	Exposure Rate mR/Day Hanford	Measurement Period	Exposure Rate mR/Day Richland	Exposure Rate mR/Day Hanford
12/30/66-1/3/67	0.27	0.34	4/14 - 4/17	0.22	0.36
1/3 - 1/6	0.34	0.40	4/17 - 4/19	0.29	0.50
1/6 - 1/9	0.35	0.45	4/19 - 4/21	0.29	0.37
1/9 - 1/11	0.50	0.59	4/21 - 4/24	0.36	0.34
1/11 - 1/13	0.20	0.27	4/24 - 4/26	0.18	0.32
1/13 - 1/16	0.25	0.36	4/26 - 4/28	0.26	0.35
1/16 - 1/18	0.29	Lost	4/28 - 5/1	0.25	0.41
1/20 - 1/23	0.27	0.33	5/1 - 5/3	0.24	0.30
1/23 - 1/25	0.31	0.39	5/3 - 5/5	0.21	0.33
1/25 - 1/27	0.27	0.35	5/5 - 5/8	0.22	0.36
1/27 - 1/30	0.20	0.32	5/8 - 5/10	0.22	0.35
1/30 - 2/1	0.23	0.23	5/10 - 5/12	0.23	0.29
2/1 - 2/6	0.20	0.22	5/12 - 5/15	0.30	0.38
2/6 - 2/8	0.19	0.37	5/15 - 5/17	0.24	0.38
2/8 - 2/10	0.26	0.29	5/17 - 5/19	0.18	0.25
2/10 - 2/14	0.29	0.36	5/19 - 5/22	0.23	0.36
2/14 - 2/17	0.27	0.32	5/22 - 5/24	0.19	0.26
2/17 - 2/20	0.25	0.35	5/24 - 5/26	0.24	0.33
2/20 - 2/22	0.31	0.36	5/26 - 5/29	0.21	0.32
2/22 - 2/23	0.32	0.40	5/29 - 5/31	0.21	0.31
2/23 - 2/27	0.26	0.44	5/31 - 6/2	Lost	0.86
2/27 - 3/1	0.14	0.36	6/5 - 6/7	0.23	0.80
3/1 - 3/3	0.18	0.27	6/7 - 6/9	0.20	0.28
3/3 - 3/6	0.24	0.42	6/9 - 6/12	0.21	0.30
3/6 - 3/8	0.15	0.33	6/12 - 6/14	0.36	0.22
3/8 - 3/10	0.49	0.52	6/14 - 6/16	0.24	0.31
3/10 - 3/13	0.27	0.42	6/16 - 6/19	0.28	0.38
3/13 - 3/15	0.18	0.36	6/19 - 6/21	0.31	0.38
3/15 - 3/17	0.25	0.32	6/21 - 6/23	0.26	0.27
3/17 - 3/20	0.21	0.39	6/23 - 6/26	0.26	0.31
3/20 - 3/22	0.19	0.29	6/26 - 6/28	0.26	0.29
3/22 0 3/24	0.20	0.45	6/28 - 6/30	0.26	0.26
3/24 - 3/27	0.37	0.37	6/30 - 7/3	0.27	0.35
3/27 - 3/29	0.24	0.37	7/3 - 7/5	0.22	0.28
3/29 - 3/31	0.23	0.37	7/5 - 7/7	0.53	0.27
3/31 - 4/3	0.25	0.42	7/7 - 7/10	0.32	0.34
4/3 - 4/5	0.25	0.33	7/10 - 7/12	0.62	0.77
4/5 - 4/7	0.20	0.30	7/12 - 7/14	0.30	0.22
4/7 - 4/10	0.25	0.36	7/14 - 7/17	0.18	0.35
4/10 - 4/12	0.17	0.32	7/19 - 7/21	0.34	0.26
4/12 - 4/14	0.22	0.31	7/21 - 7/24	0.22	0.24

APPENDIX H
Table 1 (continued)

Measurement Period	Exposure Rate mR/Day Richland	Exposure Rate mR/Day Hanford	Measurement Period	Exposure Rate mR/Day Richland	Exposure Rate mR/Day Hanford
7/24 - 7/26	0.23	0.23	10/11 - 10/13	0.31	0.34
7/26 - 7/28	0.24	0.43	10/13 - 10/16	0.25	0.49
7/31 - 8/2	0.20	0.26	10/16 - 10/18	0.44	0.45
8/2 - 8/4	0.26	0.29	10/18 - 10/20	0.30	0.42
8/4 - 8/7	0.28	0.34	10/20 - 10/23	0.34	0.53
8/7 - 8/9	0.17	0.33	10/23 - 10/25	0.30	0.45
8/9 - 8/11	0.29	0.31	10/25 - 10/27	0.30	0.32
8/11 - 8/14	0.28	0.36	10/27 - 10/30	0.30	0.48
8/14 - 8/16	0.30	0.31	10/30 - 11/1	0.32	0.33
8/16 - 8/18	0.27	0.34	11/1 - 11/3	0.31	0.34
8/18 - 8/21	0.34	0.17	11/3 - 11/6	0.37	0.48
8/21 - 8/23	0.17	0.30	11/6 - 11/8	0.33	0.51
8/23 - 8/25	0.19	0.25	11/8 - 11/10	0.28	0.36
8/25 - 8/28	0.28	0.39	11/10 - 11/13	0.27	0.42
8/28 - 8/30	0.12	0.15	11/13 - 11/15	0.22	0.34
8/30 - 9/1	0.12	0.17	11/15 - 11/17	0.27	0.34
9/1 - 9/5	0.29	0.16	11/17 - 11/20	0.19	0.35
9/5 - 9/8	0.15	0.20	11/20 - 11/22	0.44	0.32
9/8 - 9/11	0.12	0.16	11/22 - 11/27	0.20	0.32
9/11 - 9/13	0.10	0.16	11/27 - 11/29	0.36	0.37
9/13 - 9/15	0.12	0.12	11/29 - 12/1	0.24	0.27
9/15 - 9/18	0.13	0.17	12/1 - 12/4	0.28	0.42
9/18 - 9/20	0.24	0.24	12/4 - 12/6	0.20	0.37
9/20 - 9/22	0.25	0.32	12/6 - 12/8	0.26	0.43
9/22 - 9/25	0.29	0.34	12/8 - 12/11	0.26	0.34
9/25 - 9/27	0.18	0.25	12/11 - 12/13	0.16	0.14
9/27 - 9/29	0.25	0.39	12/13 - 12/18	0.49	No Data
9/29 - 10/2	0.22	0.34	12/18 - 12/20	0.26	0.55
10/2 - 10/4	0.27	0.28	12/20 - 12/22	0.15	0.32
10/6 - 10/9	0.40	0.42	12/22 - 12/27	0.31	0.38
10/9 - 10/11	0.15	0.39	12/27 - 12/29	0.34	0.41

APPENDIX H
Table 2

IONIZATION CHAMBER MEASUREMENTS IN THE COLUMBIA RIVER - 1967

Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day
Vernita Bridge					
12/28 - 1/10	ND*	5/9 - 5/16	0.67	9/12 - 9/19	ND
1/10 - 1/17	0.68	5/16 - 5/30	ND	9/19 - 9/26	0.78
1/17 - 1/24	0.11	5/30 - 6/6	0.39	9/26 - 10/17	ND
1/24 - 1/31	0.18	6/6 - 6/13	ND	10/17 - 10/24	1.81
1/31 - 2/7	0.39	6/13 - 6/20	1.14	10/24 - 10/31	0.58
2/7 - 3/07	ND	6/20 - 6/27	0.65	10/31 - 11/7	ND
3/7 - 3/14	0.73	6/27 - 8/1	ND	11/7 - 11/14	0.44
3/14 - 3/21	0.84	8/1 - 8/8	0.66	11/14 - 11/21	0.53
3/21 - 3/28	0.85	8/8 - 8/15	0.59	11/21 - 11/28	0.14
3/28 - 4/11	ND	8/15 - 8/22	0.59	11/28 - 12/5	0.45
4/11 - 4/18	0.34	8/22 - 8/29	0.58	12/5 - 12/12	0.89
4/18 - 4/25	0.58	8/29 - 9/5	0.12	12/12 - 12/19	0.60
4/25 - 5/2	0.97	9/5 - 9/12	0.66	12/19 - 12/27	1.61
5/2 - 5/9	0.27				
Old Hanford Ferry					
12/28 - 1/3	ND	4/25 - 5/2	4.65	9/12 - 9/19	3.54
1/3 - 1/10	3.93	5/2 - 5/9	ND	9/19 - 9/26	2.49
1/10 - 1/17	3.10	5/9 - 5/16	2.38	9/26 - 10/17	ND
1/17 - 1/24	2.55	5/16 - 5/23	ND	10/17 - 10/24	4.20
1/24 - 1/31	2.87	5/23 - 5/30	1.72	10/24 - 10/31	3.76
1/31 - 2/7	ND	5/30 - 6/20	ND	10/31 - 11/7	4.40
2/7 - 2/14	4.40	6/20 - 6/27	1.96	11/7 - 11/14	2.17
2/14 - 2/21	3.85	6/27 - 7/5	2.19	11/14 - 11/21	3.52
2/21 - 2/28	4.77	7/5 - 7/11	5.33	11/21 - 11/28	3.09
2/28 - 3/7	3.43	7/11 - 7/18	0.42	11/28 - 12/5	3.34
3/7 - 3/14	3.76	7/18 - 7/25	1.45	12/5 - 12/12	4.36
3/14 - 3/21	2.08	7/25 - 8/1	ND	12/12 - 12/19	2.62
3/21 - 3/28	2.84	8/1 - 8/8	1.48	12/19 - 12/27	5.0
3/28 - 4/4	1.68	8/8 - 8/15	3.66		
4/4 - 4/11	1.68	8/15 - 8/22	2.88		
4/11 - 4/18	3.80	8/22 - 8/29	5.81		
4/18 - 4/25	4.92	8/29 - 9/12	ND		

* ND - No Data (lost pencils or invalid measurements)

APPENDIX H
Table 2 (continued)

Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day
Ringold					
12/28 - 1/3	2.88	3/21 - 3/28	3.27	6/13 - 6/20	0.83
1/3 - 1/10	1.66	3/28 - 4/4	2.66	6/20 - 6/27	1.59
1/10 - 1/17	2.61	4/4 - 4/11	1.47	6/27 - 7/5	1.61
1/17 - 1/24	1.40	4/11 - 4/18	2.90	7/5 - 7/11	2.89
1/24 - 1/31	2.16	4/18 - 4/25	2.44	7/11 - 7/18	0.51
1/31 - 2/7	2.22	4/25 - 5/2	3.02	7/18 - 11/14	ND
2/7 - 2/14	3.00	5/2 - 5/9	2.26	11/14 - 11/21	2.30
2/14 - 2/21	1.83	5/9 - 5/16	1.92	11/21 - 12/12	ND
2/21 - 2/28	2.16	5/16 - 6/6	ND*	12/12 - 12/19	2.21
2/28 - 3/7	2.16	6/6 - 6/13	0.17	12/19 - 12/27	ND
3/7 - 3/14	2.80				
3/14 - 3/21	1.92				
300 Area					
12/28 - 1/3	7.73	4/4 - 4/11	4.89	8/15 - 8/22	2.69
1/3 - 1/10	3.24	4/11 - 4/18	4.65	8/22 - 8/29	5.20
1/10 - 1/17	2.83	4/18 - 4/25	4.02	8/29 - 9/5	ND
1/17 - 1/24	2.66	4/25 - 5/2	4.21	9/5 - 9/12	2.57
1/24 - 1/31	3.72	5/2 - 5/9	ND	9/12 - 9/19	2.20
1/31 - 2/7	ND	5/9 - 5/16	3.00	9/19 - 9/26	2.64
2/7 - 2/14	3.74	5/16 - 5/23	3.42	9/26 - 10/24	ND
2/14 - 2/21	3.28	5/23 - 5/30	2.68	10/24 - 10/31	3.74
2/21 - 2/28	3.89	5/30 - 6/27	ND	10/31 - 11/7	5.39
2/28 - 3/7	3.89	6/27 - 7/5	0.78	11/7 - 11/14	3.27
3/7 - 3/14	4.31	7/5 - 7/11	3.93	11/14 - 11/21	3.61
3/14 - 3/21	3.59	7/11 - 7/18	3.26	11/21 - 11/28	3.48
3/21 - 3/28	3.71	7/18 - 8/8	ND	11/28 - 12/5	3.78
3/28 - 4/4	4.16	8/8 - 8/15	4.02	12/5 - 12/12	5.31
				12/12 - 12/27	ND
Richland Marina					
12/28 - 1/3	1.75	2/14 - 2/21	3.50	4/4 - 4/11	2.70
1/3 - 1/10	4.79	2/21 - 2/28	ND	4/11 - 4/18	2.65
1/10 - 1/17	2.07	2/28 - 3/7	2.78	4/18 - 4/25	2.50
1/17 - 1/24	2.28	3/7 - 3/14	2.49	4/25 - 5/2	3.17
1/24 - 1/31	2.09	3/14 - 3/21	2.06	5/2 - 5/9	1.86
1/31 - 2/7	2.32	3/21 - 3/28	1.87	5/9 - 5/16	2.09
2/7 - 2/14	2.51	3/28 - 4/4	2.82	5/16 - 5/23	2.10

* ND - No Data (lost pencils or invalid measurements)

APPENDIX H
Table 2 (continued)

Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day	Measurement Period	Exposure Rate mR/Day
Richland Marina (continued)					
5/23 - 8/1	ND*	9/12 - 9/19	2.82	11/7 - 11/14	4.89
8/1 - 8/8	1.70	9/19 - 9/26	1.73	11/14 - 11/21	1.29
8/8 - 8/15	3.17	9/26 - 10/3	3.56	11/21 - 11/28	1.82
8/15 - 8/22	2.87	10/3 - 10/17	ND	11/28 - 12/5	1.13
8/22 - 8/29	2.24	10/17 - 10/24	4.38	12/5 - 12/12	1.38
8/29 - 9/5	1.66	10/24 - 10/31	2.30	12/12 - 12/19	1.92
9/5 - 9/12	3.02	10/31 - 11/7	ND	12/19 - 12/27	2.13
McNary Dam					
12/28 - 1/3	0.62	5/2 - 5/9	0.15	8/29 - 9/5	1.23
1/3 - 1/10	0.36	5/9 - 5/16	0.15	9/5 - 9/12	0.81
1/10 - 1/17	0.43	5/16 - 5/23	0.26	9/12 - 9/19	1.20
1/17 - 1/24	0.43	5/23 - 5/30	0.34	9/19 - 9/26	1.27
1/24 - 1/31	ND	5/30 - 6/6	0.33	9/26 - 10/17	ND
1/31 - 2/7	0.37	6/6 - 6/13	0.28	10/17 - 10/24	0.63
2/7 - 2/14	0.59	6/13 - 6/20	0.33	10/24 - 10/31	1.00
2/14 - 2/21	0.31	6/20 - 6/27	0.19	10/31 - 11/7	0.91
2/21 - 3/14	ND	6/27 - 7/5	0.19	11/7 - 11/14	0.75
3/14 - 3/21	0.36	7/5 - 7/18	ND	11/14 - 11/28	ND
3/21 - 3/28	0.29	7/18 - 7/25	0.34	11/28 - 12/5	0.57
3/28 - 4/4	0.47	7/25 - 8/1	0.26	12/5 - 12/12	0.65
4/4 - 4/11	0.35	8/1 - 8/8	0.32	12/12 - 12/19	1.01
4/11 - 4/18	0.37	8/8 - 8/15	0.41	12/19 - 12/27	1.01
4/18 - 4/25	0.43	8/15 - 8/22	0.43	12/27 - 1/2/68	0.72
4/25 - 5/2	0.39	8/22 - 8/29	0.25		

* ND - No Data (lost pencils or invalid measurements)

APPENDIX H
TABLE 3

EXTERNAL EXPOSURE RATE MEASUREMENT AT 3' ABOVE THE COLUMBIA RIVER SHORELINE AT THE RICHLAND TRAVERSE AND AT SACAJAWEA-1967

Date	Exposure Rate, μR/hr	Date	Exposure Rate, μR/hr
Richland Traverse			
2-23-67	30	6-7-67	20
4-14-67	40	6-14-67	32
5-17-67	37	7-19-67	30
6-12-67	15	7-26-67	30
7-27-67	33	8-2-67	26
9-12-67	34	8-9-67	22
10-12-67	50	8-16-67	40
11-3-67	51	8-23-67	38
		8-30-67	20
Sacajawea		9-6-67	16
1-4-67	60	9-13-67	23
1-18-67	74	9-20-67	28
1-25-67	32	9-27-67	24
2-1-67	22	10-4-67	18
2-15-67	22	10-11-67	32
2-22-67	29	10-18-67	36
3-1-67	28	10-25-67	30
3-8-67	27	11-1-67	32
3-15-67	24	11-8-67	30
3-22-67	36	11-15-67	30
3-29-67	20	11-21-67	30
4-67	30	11-29-67	24
4-67	32	12-6-67	32
4-67	34	12-13-67	32
4-67	38	12-20-67	40
5-3-67	26	12-27-67	28
5-10-67	36		
5-17-67	16		
5-24-67	28		

APPENDIX I

CHEMICAL CHARACTERISTICS OF COLUMBIA RIVER WATER

APPENDIX I
TABLE 1

CHEMICAL CHARACTERISTICS OF COLUMBIA RIVER WATER AT HANFORD - 1967
(Results in ppm)

Date	Mg	Fe	Cu	Ca	SO_4	PO_4	Cl	D.O.	Phth Alk.	M.O. Alk.	Hard-ness	Solids
1-13-67	4		.001	23	13	.09	.35	10.5	3	55	74	94
1-24-67	4	.004		24	11	.10	.25	10.2	2	56	77	96
2-7-67	5	.006	.002	24	12	.12	.35		2	58	78	86
3-7-67	5	.05	.003	20	10	.08	.35	11.9	0	58	72	93
3-21-67	4	.03		23	15	.24	.45	12.3	1	56	75	113
4-12-67	4	.03	.002	25	15	.04	.35		0	57	77	99
4-25-67	5	.02	.007	24	14	.01	.40	11.8	0	57	78	84
5-23-67	3	.06	.001	28	25	.03	.25	10.2	0.5	45	82	91
6-6-67	4	.06	.004	19	11	.04	.30		0	51	65	70
6-20-67	3	.06	.002	19	7	.05	.20	12	0	48	60	70
7-5-67	2	.02	.003	20	7	.04	.30		ND	48	60	70
7-18-67	3	.02	.002	20	9	.03	.40	11.5	1	52	65	113
8-8-67	3	.02	.009	20	12	.02	.25	9.3	1	55	65	102
8-22-67	3	.01	.001	22	11	.02	.20	10.0	1	54	69	63
9-12	4	.02	.015	21	9	.01	.05	9.3	2	54	69	89
9-26-67	2	.02	.005	24	11	ND	.20	8.3	2	54	69	97
10-10-67	3	.02	.008	22	10	.02	.15	8.8	1	53	67	87
10-24-67	3	.01	.010	22	12	.04	.20	9.6	2	53	67	82
11-7-67	2	.02	.003	21	9	.01	.20	11.2	1	48	61	67
11-21-67	2	.01	.003	24	9	.05	.35	9.9	2	53	70	84
12-5-67	3	ND	ND	27	13	.05	.25	10.2	2	55	77	97
12-19-67	3	.03	.001	26	11	.02	.12	7.5	2	55	78	87

No entry indicates no analysis made.
ND - No data or invalid samples.

APPENDIX I
TABLE 2

CHEMICAL CHARACTERISTICS OF COLUMBIA RIVER WATER AT VERNITA - 1967

Date	Mg	Fe	Cu	Ca	SO_4	PO_4	Cl	D.O.	Phth Alk.	M.O. Alk.	Hard-ness	Solids
1-13-67	4	.008	.002	23	11	.11	.35	10.5	2	55	74	97
1-24-67	4	.001		23	10	.11	.20	10.9	2	57	73	107
2-7-67	5	.008	.002	23	12	.14	.40		2	56	77	84
3-7-67	5	.04	.002	23	10	.04	.25	11.2	1	60	76	101
3-21-67	4	.08	.001	24	15	.16	.30	11.5	2	57	76	112
4-12-67	4	.03	ND	25	15	.14	.27		0	60	78	96
4-25-67	4	.04	.002	24	15	.10	.30	12.8	0	62	77	89
5-23-67	5	.04	.005	28	30	.03	.25	11.2	0.3	48	90	94
6-6-67	3	.08	.007	19	15	.05	.35		0	55	61	73
6-20-67	3	.07	.003	19	7	.06	.20	13	0	48	59	66
7-5-67	2	.02	.002	22	7	.04	.25		ND	50	64	80
7-18-67	3	.02	.003	22	8	.03	.20	12.8	1	52	68	101
8-8-67	3	.02	.001	21	11	.02	.15	9.9	1	51	106	106
8-22-67	3	.01	.001	22	9	.02	.15	10.4	1	56	67	65
9-12-67	3	.02	.003	22	11		.15	9.6	1	51	67	93
9-26-67	2	.01	.003	28	11	.02	.20	8.6	2	54	67	97
10-10-67	2	.02	.001	23	8	.03	.20	8.8	1	52	62	87
10-24-67	3	.01	.002	22	11	.03	.35	9.6	1	53	66	83
11-7-67	2	.01	.002	20	9	.01	.25	9.6	1	47	61	74
11-21-67	2	.01	.007	25	9	.06	.20	9.9	2	52	72	77
12-5-67	3	.02	.001	26	12	.05	.30	11.7	2	56	77	97
12-19-67	4	.02	.001	25	11	.04	.10	10.6	2	55	79	85

No entry indicates no analysis made.
ND - No data or invalid samples.

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